A STUDY OF PREMIUM STABILITY

IN COMPULSORY AUTOMOBILE INSURANCE

BY THE ALBERTA AUTOMOBILE INSURANCE BOARD
FOR THE MINISTER OF CONSUMER AND CORPORATE AFFAIRS
OF THE GOVERNMENT OF ALBERTA

Volume 1

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AUTOMOBILE INSURANCE
BOARD

19th Floor, 10025 Jasper Avenue, Edmonton, Alberta, Canada T5J 3Z5 403/427-5428

September 12, 1991

The Honourable Dennis Anderson
Minister of Consumer and Corporate Affairs
229 Legislative Building
Edmonton, Alberta

Honourable Sir:

With this letter, the Alberta Automobile Insurance Board transmits its report on Premium Stability in Compulsory Automobile Insurance.

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I. EXECUTIVE SUMMARY AND RECOMMENDATIONS

The Alberta Automobile Insurance Board (the "Board") undertook a study of the existing automobile insurance system to determine whether there was a problem with premium instability and if so, whether the cure was to modify its tort and no fault features. The terms of reference of the study were as follows.

TERMS OF REFERENCE

Whereas concerns have been raised about the adequacy of pricing of compulsory automobile insurance products in Alberta, and whether there are means to ensure greater stability of pricing of such products in the short term and long term for the benefit of Alberta motorists;

And whereas the Alberta Automobile Insurance Board has been monitoring the current pricing increases of automobile insurance products sought by automobile insurance suppliers for the Province of Alberta;

And whereas it appears desirable to examine the current costs of compulsory automobile insurance products available to Alberta motorists, and the merits of the existing tort system for personal injury and property damage by automobile accident, and certain proposals for improvement to the tort system and the question of whether certain features of no fault automobile insurance systems might better serve Alberta motorists;

Now therefore, at the request of the Minister of Consumer and Corporate Affairs, the Honourable Dennis Anderson, the Alberta Automobile Insurance Board will undertake a study of the automobile insurance system in Alberta, and report upon the following:

The cost effectiveness of the current automobile insurance system for claims arising out of automobile accidents.

The desirability of implementing modest reforms to the current automobile insurance system to enhance its cost effectiveness.

The cost savings and effectiveness of a no fault system for compensation for claims arising out of automobile accidents.

Whether there are reasonable grounds to support the proposition that modifications to the current system that enlarge no fault features would produce greater price stability in the short and long term.

The study was undertaken in three stages. First, the Board considered the costs of automobile insurance to Alberta motorists. Second, the Board analyzed the issue of premium stability in the short and long terms in light of the findings at the first stage. Third, the Board examined two methods to control increases in premium increases.

ANALYSIS OF COST OF AUTOMOBILE INSURANCE TO ALBERTA MOTORISTS

The Board examined the history of automobile insurance premiums and loss costs from 1972 to 1989. It undertook surveys of bodily injury and accident benefit claims between 1988 and 1990 and reported upon the condition of current premiums and costs levels. Its findings are as follows.

1. Historically, there has not been stability of automobile insurance premiums in Alberta. However, in constant dollars, the cost of automobile insurance declined steadily from 1977-1989. Moreover, the amounts and types of automobile insurance coverage increased over that period. Alberta motorists in 1989 received a more extensive insurance product for their dollar than was the case in 1972.
2. Loss costs have increased dramatically since 1985. The main reason for the increase in claims costs was the increase in bodily injury loss costs. Most of those costs resulted from non-pecuniary general damages claims.
3. Insurers could have justified premium increases since 1985. Until 1989, they had not sought necessary increases due to intense competition in the market place. As a result, Alberta motorists have paid less for insurance than it actually cost from 1985 to 1990.
4. The Board granted increases in third party liability premiums in 1989 and 1990. The increases were justified because loss costs continually exceeded premium levels after accounting for operating costs.
5. The recent increases have not yet brought premiums into balance with the current expected costs. The Board expects that loss costs will continue to increase because of continuing increases in frequency and severity of injury claims.
6. Claimants with minor injuries are overcompensated in the tort side of the system relative to all other traffic accident claimants. Claimants with catastrophic injuries are undercompensated in the tort side of the system relative to all other traffic accident claimants.
7. Wage indemnity, death benefits, funeral benefits and rehabilitation benefits provided by the no fault feature of the current system are inadequate. Thus, at fault claimants are inadequately

compensated for their economic losses relative to tort claimants.

8. There are certain structural deficiencies in the delivery of benefits in the current system. All payments required under the current system are subject to delays.

WHETHER PREMIUM STABILITY IS LIKELY IN THE FUTURE

The Board determined there is a pricing problem in the automobile insurance system in Alberta at the present time. The problem is that automobile insurance premium levels are not sufficient to meet current loss costs. There are two reasons for the deficiency in premium levels. The first reason is that market competition maintained the cost of automobile insurance at artificially low levels between 1985 and 1988. Automobile insurance suppliers can no longer supply the product below cost. The second reason is that loss costs have increased in recent years at unusually high rates. The Board concludes that the pressure on loss costs has been caused mainly by the rate of increase of bodily injury loss costs. Its data show that the rate was 12.9% between 1988 and 1990, more than twice that of the Consumer Price Index.

The Board concludes that automobile insurance premiums will rise in the short term, that is, over the next five years, in order to correct price inadequacy caused by the accumulated premium deficiencies. There is however, no specific feature operating in the current system to control increases in claims costs. Thus the Board expects loss costs will also continue to increase in the long term unless bodily injury costs are curtailed in some fashion.

There is a threshold question to be determined by the Government. This question is whether the emerging problem of premium instability should be resolved by non-intervention, i.e., by allowing the premiums to continually rise to meet loss cost levels or through intervention, i.e., by modifying the structure of the automobile insurance system to control loss costs. The Board recommends the Government undertake further study to determine whether Albertans desire the premium levels or the cost levels to be contained.

The Board's findings are summarized as follows:

9. The premium increases recently seen in 1988-1990 have been required for two reasons. The first is the accumulated premium deficiencies. Premiums will continue to increase in the short term at least to compensate for deficiencies. The second reason is the claims cost increases. There is no specific feature in the current system operating to control these increases. As a result, the Board foresees that premiums will continue to increase both in the short and long terms unless bodily injury costs are curtailed in some fashion.
10. There is no uniform viewpoint among participants in the system about whether the costs or the premium levels should be curtailed to preserve the balance to the system.
11. The cost of automobile insurance will continue to mount in the future, if effective cost-saving measures are not undertaken. As the price increases, more and more motorists will have difficulty affording automobile insurance. The resulting dissatisfaction will have to be addressed either by the participants in the system, or the Government, or both.

METHODS TO CONTROL PREMIUM INCREASES

The Board examined two methods to flatten or reduce future premium costs. The first method is a set of effective government measures to reduce severity and frequency of accident costs. The second method is to modify the automobile insurance system to reduce the amounts paid to traffic victims.

A. REDUCTION OF ACCIDENT FREQUENCY AND SEVERITY

The Board's findings were as follows:

12. Reducing the frequency and severity of accidents will ameliorate the problem of increasing costs of automobile insurance. Reduction of the causes of those costs should be a priority, irrespective of any modification of the automobile insurance system.

13. The Government should:

    a. set up a coordinated approach to traffic safety and carry out a unified policy of safety measures to reduce traffic accidents in Alberta.

    b. engage police in a year round program of primary enforcement of the seatbelt law.

    c. support federal authority responsible for vehicle safety standards requiring airbags and automatic restraint systems in new vehicles.

    d. double penalties for unsafe speed and other traffic offences most often committed in injury accidents.

    e. reassess the use of police resources in urban and rural areas to target and increase enforcement of offences involving large deviations from average traffic speeds and those offences most often correlated with injury accidents.

    f. upgrade the Check Stop program, by the following:

        (i) promoting the authorization of police to administer breath tests to all drivers,
        (ii) targeting nighttime hours, and rural areas,
        (iii) operating it more frequently during the year and,
        (iv) publicizing the added enforcement features and results for violations.

    g. carry out a graduated licensing program for new drivers.

    h. make greater use of short term licence suspensions.

    i. study the feasibility of raising the minimum legal age for consumption of alcohol.

    j. study the feasibility of driver safety education programs for school age children to foster appropriate attitudes at an early age.

    k. study the feasibility of effective rewards to engender greater care in driving.

    l. require insurers to show rate rewards and disincentives on automobile policies.

    m. study the feasibility of raising the minimum legal age for driving.

    n. study effective methods for improvement of highway design and conditions especially in rural areas.

    o. investigate the feasibility of setting up trauma and improved rehabilitation centres.

B. CLAIM COST CONTAINMENT IN THE AUTOMOBILE INSURANCE SYSTEM

The second method to control premium increases is containment of claims costs by adjusting the amount of monetary compensation paid to traffic injury victims. The Board undertook an economic analysis of the current system and five alternate models. A detailed evaluation revealed that no one system was superior overall in attaining the objectives of an automobile insurance system.

The Board concluded that the Government should undertake additional study to determine whether Albertans desire to transform the existing system to better attain other or additional social goals than those currently served by the existing system.

In addressing the goal of attaining premium stability in the short and long terms, the Board developed three optional courses of action for consideration by the Government. Each option preserves some tort element, but enhances the no fault element of the current system.

Its findings and recommendations are as follows:

14. Alberta motorists must buy third party liability insurance to operate motor vehicles in the province. If the insurance supplied must be affordable and available to them, and if that goal requires maintenance of the cost of automobile insurance at constant, or at least acceptable levels, then the system must adjust the compensation or benefits side of the ledger. The adjustment must be a reduction or limitation of the amount of monetary compensation provided to accident injury victims.

15. The Board proposes two options for reform to attain premium stability in the short term. The first option, ("Option 1"), consists of modest reforms of tort and no fault features of the current system.

16. The first tort reform contemplated by Option I is a limitation upon the right of recovery for all non-pecuniary damage claims in the form of a deductible of $10,000. This means that the system would not compensate any claim for non-pecuniary general damages of a value of less than or equal to $10,000. Any non-pecuniary general damage claim above the value of $10,000 would be reduced by that amount.

17. The Board suggests the creation of a panel of judges, physicians, experienced tort lawyers, consumer and insurance company claims representatives to establish guidelines to determine what claims will fall below the $10,000 limit. Such guidelines could promote certainty and dissuade litigation in respect of the $10,000 floor level.

18. The second tort reform is an extension of the limit of $100,000 set in 1978 (and indexed for inflation) for recovery of non-pecuniary general damages for those victims with catastrophic injuries. The Board proposes that the limit be increased to the level of $300,000 and thereafter indexed for inflation. Although all claims for non-pecuniary general damages would be subject to the deductible, the increase of the existing ceiling of $225,000 (indexed to 1991 dollars) to $300,000 would provide some measure of horizontal equity for victims with catastrophic injuries. This reform is unlikely to result in a measurable increase in premium.

19. The Board's consulting actuary estimates that the implementation of the deductible plan as above outlined would produce a saving of about $34-$40 of loss costs per insured automobile in 1990.

20. The Board recommends implementation of Option 1 contemporaneously with other tort reforms such as legislation to enact mandatory structured settlements, adjustment of prejudgment interest rates for non-pecuniary general damages, and elimination of the collateral benefits rule.

21. The Board proposes increases to the existing no fault benefits as follows:

    a. increase of medical and rehabilitation benefits up to $25,000 per person.

    b. increase of death benefits - death of head of household-$10,000, plus $1,000 for each claimant beyond the first plus 1% of principal sum for 104 weeks - death of spouse - $10,000 - death of dependant - $2,000.

    c. funeral benefits - $3,000 per person.

    d. income replacement - 75% of gross wages to a maximum of $500/week for 104 weeks.

    e. unpaid homemakers - $70 per week for 26 weeks if totally disabled.

    These benefits should be subject to annual review or indexing.

22. The Board recommends that the current system pay income replacement benefits on a secondary basis rather than a contributory basis as is the case at present. The problem with contributory compensation is that it can result in overcompensation where other sources of income replacement that are available do not take contributory sources into account. If the benefits are increased to current needs, the overcompensation effect would be significant.

23. The Board's consulting actuary advises that these modest changes to the no fault benefits scheme together with the deductible plan would likely result in an saving of about $32 per automobile in relation to the 1990 product. The change to the no fault benefits taken together with the deductible plan should produce a net saving of $37 per insured automobile for the 1992 product.

24. If delays in delivering benefits were due to lack of clarity in the process or lack of diligence on the part of insurers, the Government could request the Superintendent to work with the industry to simplify the application process in the first case and legislate time requirements for payment of no fault benefits as well as penalties for non compliance in the second case. The result would reduce delays in compensation payments.

25. Assuming some additional modest savings attainable through the implementation of the remaining tort reforms mentioned in paragraph 20, and assuming some additional modest premium increases are granted in the short term, the Board expects the implementation of Option 1 would achieve the goal of price stability in the short term.

26. The Board is unable to determine whether Option 1 will be effective to ensure automobile insurance premium stability in the long term. The Board thus recommends a second option ("Option 2") for consideration.

27. Option 2 is the implementation of an enhanced no fault benefits scheme with full tort rights subject to a deductible of $10,000 for all non-pecuniary general damage claims, and other tort reforms mentioned in paragraphs 18 and 20 above.

28. The no fault benefits package under Option 2 would consist of the following:

a. medical and rehabilitation - up to $500,000 per person for 10 years or 20 years less the victim's age, whichever is the longer, such coverage to be secondary to other health care coverage.

b. long term care - up to $500,000 per person.

c. death benefits - $25,000 for death of the head of the household or spouse plus $10,000 for each dependant.
- $10,000 for each dependant.

d. funeral benefit	- $3,000 per person.
e. income replacement	- 75% of gross wages to a maximum of $500 per week, with a 7 day waiting period for employed persons, and 60 day wait for the deemed to be employed, i.e. those persons who can prove that they had employment for 6 of the 12 months previous to the loss. - students at the elementary school level to receive $1,000 per year lost; students at the secondary level to receive $2,000 per year; such claimants who attain age 19 and remain disabled and cannot attend school, receive $340 per week. - students at college or university level to receive $4,000 per year lost; such claimants after date otherwise expected to graduate, still disabled, receive $340 per week. - $200 per week for child care plus $50 per child or dependant to a maximum of $350 per week. - $50 per week for home care based on reasonable expenses.

These benefits should be subject to annual review or indexing.

29. The Board's actuary provided costing estimates for Option 2 depending whether the income replacement benefits are primary, i.e., payable firstly and entirely by the automobile insurance no fault benefits, or secondary, i.e., payable secondly to all disability and wage benefits from any other existing sources. In addition, costings were estimated for the 1990 product and then projected for the price of the product in 1992.

30. If Option 2 were implemented with the benefits to be primary, the savings to the 1990 product are estimated at $24 per automobile. If the benefits were secondary, the savings to the 1990 product are estimated at $27 per automobile. If Option 2 were implemented with primary benefits, the estimated savings on the 1992 product would be $29. Option 2 with secondary benefits would produce a savings of $32 on the 1992 product.

31. The cost savings under Option 2 are lower in most estimates than the cost savings expected under Option 1. The reason is that the no fault benefits package under Option 2 is considerably more generous than is the package under Option 1.

32. The Board prefers Option 2 over Option 1. Although the cost savings are lower under Option 2 than under Option 1, the Option 2 benefits are more in line with the needs of Alberta traffic injury victims in 1991-92. Moreover, the Board considers that Option 2 is more likely to reduce

litigation and curtail the inflationary effect of claims costs over time. As a result, although the savings in Option 1 are likely to be greater in the short term, the Board concludes that Option 2 may well prove to be a satisfactory solution to the problem of premium stability not only in the short term but also in the long term.

33. The Board recommends the Government implement either Option 1 or 2 in the short term if it decides that the problem of premium stability in automobile insurance must be solved by some method of cost containment. It should further study the solution for premium stability in the long term. As indicated, Option 2 may well prove to be a satisfactory solution to the problem in the long term.

34. The Board proposes a further option ("Option 3") for consideration of the premium stability problem in the long term. Option 3 is the implementation of a threshold no fault system with the enhanced no fault benefits package described in paragraph 28 above.

The main difference between Option 2 and Option 3 is that under Option 2 tort rights are fully preserved apart from the limitation of the $10,000 deductible upon all non-pecuniary general damage claims. Under Option 3, tort rights are intended to be restricted to only the most serious injury claims. Implementation of Option 3 would require consideration of the type of threshold system Alberta should have. The Option 3 in this report assumes the threshold is the same as that currently in place in Ontario.

35. The Board's actuary undertook costings of Option 3 assuming the benefits were either primary or secondary, and then predicting the cost of the product in 1990 and 1992.

36. If Option 3 were implemented and the benefits were primary, the cost savings on the 1990 product are estimated to be $65 per automobile. If Option 3 were implemented and the benefits were secondary, the estimated savings on the 1990 product would be $72. If Option 3 were implemented and the benefits were primary, the savings to the 1992 product are estimated at $77. If Option 3 were implemented and the benefits were secondary, the savings to the 1992 product are estimated in the amount of $85.

37. The estimates show that the cost savings are the highest under Option 3, the threshold model.

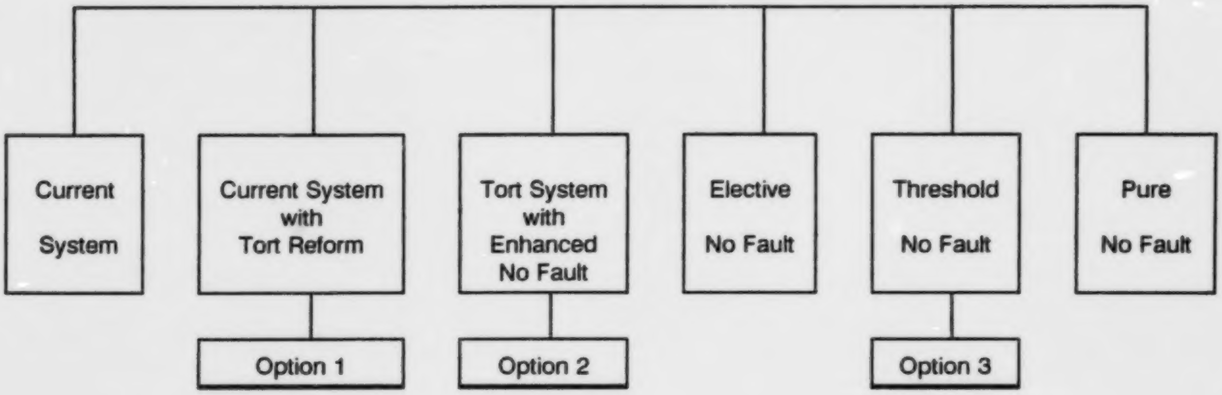
Option 3 has the greater potential for premium savings. However, Option 3 limits the tort feature of the automobile insurance system more severely than Option 2. The Board is of the view that for the achievement of price stability in the long term, either Option 2 or Option 3 would be suitable.

38. The Board did not obtain cost estimates of a pure no fault model. The Board is satisfied that the cost savings would be higher under a pure no fault model similar to that in place in Quebec at present than would be attainable under any of the three options described above. However, the Board concluded that the pricing problem in Alberta would be adequately met in the long term by the implementation of either Option 2 or Option 3.

39. While the Board observes that the premium savings would be greater under the pure no fault model, the options it proposed each preserve the principle of individual responsibility for fault in certain cases, a social concept which cannot be quantified in dollar terms.

In conclusion, the Board recommends further study of the question of whether the system should widen the scope of traffic victims to be compensated as a matter of fairness rather than as a matter of attaining premium stability. The Government should determine if Albertans desire a system that is primarily fault based, or primarily based on the principle of no fault.

The Board favours the implementation of tort reforms to the current system to enhance its cost effectiveness for several reasons. First, the transformation of an automobile insurance system is a significant undertaking. In the automobile insurance market, systemic changes can cause market dislocation and instability. These conditions have negative effects on both automobile insurance consumers and suppliers. Second, the overhaul of an automobile insurance system can be costly. Moreover, the costs may have to be borne ultimately by the automobile insurance consumers. Third, the current system does not require radical change to rectify the present deficiencies. Finally, the tort features provide certain benefits to the consumer which cannot be measured in dollar terms. The Board thus recommends that the Government move conservatively toward modification of the automobile insurance system. The Board recommends the Government consider reforms by proceeding along the spectrum shown in the figure below from the left to the right until it has achieved the combination of compensation features most suitable to Alberta motorists.


Current System
Current System with Tort Reform
Tort System with Enhanced No Fault
Elective No Fault
Threshold No Fault
Pure No Fault
Option 1
Option 2
Option 3

II. BACKGROUND

This study arose from concerns of the Alberta Automobile Insurance Board ("the Board") and the Minister of Consumer and Corporate Affairs over price stability in automobile insurance premiums.

The Board's concerns stemmed from its observation that automobile insurance became underpriced in 1985 and remained underpriced over the next several years. There was a short term advantage to consumers who reaped the benefit of low insurance costs in that period. However, the Board was aware that underpriced insurance could produce unsatisfactory market conditions that would eventually affect consumers adversely. The Board warned that underpriced insurance could lead to a shrinkage in the market. It could also cause sudden, dramatic and continuous premium increases. These conditions would in their turn render compulsory automobile insurance less available and affordable.

Both the Minister and the Board noted the significant business losses posted annually by automobile insurers since 1986. The underpricing problem caused some automobile insurers to withdraw from the market and the concern over market shrinkage became real.

In late 1988, the Board encouraged automobile insurers to consider gradual increases in their premium levels to ease the developing market pressures. It expected that a series of gradual increases over a limited duration would restore price adequacy to automobile insurance. With reasonable pricing, automobile insurance would gradually become more available and the frequency and degree of cost increases would diminish. Easing of these conditions would, in turn, promote affordability.

In 1989, the Board approved several automobile insurance premium increases for modest percentages. However, the requirement of the automobile insurance industry for additional increases continued into 1990. The Minister inquired whether the pattern of continuing increases was a signal of potential instability in pricing. He asked the Board to determine whether there was a problem of premium instability in automobile insurance and if so, whether the cure was to modify the tort and no fault features of the existing automobile insurance system.

The Board proposed a study of current costs of automobile insurance claims. It retained Mr. Joe Cheng, a consulting actuary, to conduct surveys of bodily injury claims and accident benefits payments in 1988 and 1990.[1] The Board expected the surveys to reveal information about the causes and rate of insurance cost increases. The Board expected to determine from the survey results whether there was, or was likely to develop, a pricing problem in the automobile insurance system. The second stage of the study was an examination of the existing system and a comparison of alternative insurance models with varying degrees of tort and no fault features. The Board retained Messrs. Michael Trebilcock and Bruce Chapman, professors of law and economics at the University of Toronto, to perform an economic analysis of the existing and alternative automobile insurance models.[2]

Due to time and budget limitations, the Board could not perform an exhaustive analysis of the merits and deficiencies of the existing automobile insurance system. Premium stability is only one element of the system. The Board realized that if substantive changes were undertaken to control the cost features of the system, those changes would likely affect its compensation and benefit features. However, the evaluation of the most appropriate compensation and benefit features would require consideration not only of economic facts and assumptions, but also political, legal and social issues. Unfortunately, a full consideration of these issues was beyond the scope of the proposed study. The Minister and the Board agreed that the results of its study might include recommendations for further investigation of certain issues. They established the following terms of reference for the Board's study:

> Whereas concerns have been raised about the adequacy of pricing of compulsory automobile insurance products in Alberta, and whether there are means to ensure greater stability of pricing of such products in the short term and long term for the benefit of Alberta motorists;
>
> And whereas the Alberta Automobile Insurance Board has been monitoring the current pricing increases of automobile insurance products sought by automobile insurance suppliers for the Province of Alberta;
>
> And whereas it appears desirable to examine the current costs of compulsory automobile insurance products available to Alberta motorists, and the merits of the existing tort system for personal injury and property damage by automobile accident, and certain proposals for improvement to the tort system and the question of whether certain features of no fault automobile insurance systems might better serve Alberta motorists;

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[1] Joe S. Cheng, (Eckler Partners), Report on Alberta Motor Vehicle Claim Survey, August 1991.

[2] Michael J. Trebilcock and Bruce Chapman, A Review of Options for Reform Of The Alberta Automobile Compensation Regime, rev. August 30, 1991.

Now therefore, at the request of the Minister of Consumer and Corporate Affairs, the Honourable Dennis Anderson, the Alberta Automobile Insurance Board will undertake a study of the automobile insurance system in Alberta, and report upon the following:

The cost effectiveness of the current automobile insurance system for claims arising out of automobile accidents.

The desirability of implementing modest reforms to the current automobile insurance system to enhance its cost effectiveness.

The cost savings and effectiveness of a no fault system for compensation for claims arising out of automobile accidents.

Whether there are reasonable grounds to support the proposition that modifications to the current system that enlarge no fault features would produce greater price stability in the short and long term.

During its study, the Board sought information from several sources. It relied upon its consultants' advice to determine whether the premiums charged are reasonable and justifiable considering the benefits provided. In addressing the issues set out in the terms of reference, it carefully examined previous research, including the Report of Inquiry into Motor Vehicle Accident Compensation in Ontario, the most recent and comprehensive Canadian study on a related subject (hereafter referred to as the "Osborne Report").[3] It held discussions with administrators of alternate insurance systems in other jurisdictions.[4] It consulted with representatives of the industry who operated under those various alternate insurance systems. It received advice from scholars who had studied automobile insurance models in and outside Canada.[5] It obtained statistical information from various departments of the Government of Alberta and from The Insurance Bureau of Canada ("IBC") to add to the data collected by its consultants. It also considered its own information and knowledge of the operating automobile insurance system in Alberta.

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[3] The Honourable Mr. Justice Coulter A. Osborne, Report of Inquiry into Motor Vehicle Accident Compensation in Ontario. Published by the Ontario Ministry of the Attorney General and the Ministry of Financial Institutions, Queen's Printer for Ontario, February, 1988.

[4] Meetings were held with the Societe de l'assurance automobile du Quebec, the Department of Licensing and Regulation of the Insurance Bureau of the State of Michigan, and the Ontario Insurance Commission in February and June of 1991.

[5] Discussions were held with Professor Marc Gaudry of the Centre de recherche sur les transports at the Universite de Montreal, Professors Claude Fluet and Pierre Lefebvre of the Department of Economic Science at the University of Quebec at Montreal, Professor Jean Bigot, at the University of Paris, and Professors Michael Trebilcock and Bruce Chapman, of the University of Toronto.

After consideration of all of the information gathered, it determined the likely causes of automobile insurance cost increases. It formulated an opinion about whether there will be price stability in automobile insurance in Alberta in the short and long terms. The results of its study appear below in three stages. The first stage is an analysis of the costs of automobile insurance to Alberta motorists. The second stage is an analysis of the issue of premium stability. The third stage is an examination of the methods to control increases in loss costs. A summary of the Board's conclusions and recommendations appears in the Executive Summary.

III. ANALYSIS OF COST OF AUTOMOBILE INSURANCE TO ALBERTA MOTORISTS.

The following analysis contains certain terms, such as "average premium", "loss cost", "claim cost" and "frequency" that are common to the automobile insurance industry. In this study, the average premium refers to the average earned premium for each vehicle insured. As policies may be in force for portions of two calendar years, i.e. from July 1 of one year to July 1 of the next, the premium is earned over two calendar years. Thus earned premium refers to the proportion of premium used during the calendar year under consideration. Loss cost refers to the total amount of losses and loss adjustment expenses for a given year divided by the number of vehicles insured. The claim cost is the total amount of the losses and loss adjustment expenses for a given year divided by the number of claims incurred. Frequency is determined by dividing the number of claims incurred for a given year per 100 vehicles insured.

The Board chose to examine current premiums and loss costs for private passenger vehicles by considering the Alberta trends over the past two decades. The Board considered it reasonable to view increases in automobile insurance premiums over an extended period. It decided to measure premium increases in constant dollars (adjusted for inflation) as well as in nominal dollars (unadjusted for inflation). It further took account of the historic relationship between loss costs and premiums. This relationship is considered since it is the accepted practice of insurers to rely on past loss cost experience in predicting future loss costs.[6] Thus the premium and loss costs analysis began with a brief historical review of the period from 1972-1989.

A. HISTORICAL REVIEW OF PREMIUM AND LOSS COST LEVELS FROM 1972-1989

Alberta had 487,086 insured vehicles in 1972. The amount of insurance premiums paid totalled $66,581,225 in nominal dollars. The average premium paid for an insured vehicle for all coverages was $137 in nominal dollars. As for optional automobile insurance coverages, only 67% of insured vehicles carried collision coverage. Only 34.4% of insured vehicles carried comprehensive coverage. However, 35.4% of insured vehicles carried specified perils coverage. Over the next seventeen years, all of these aspects underwent strong changes.

By 1989, there were 1,297,804 insured vehicles in Alberta. This number produced a total premium volume of $557,038,476 and an average premium per insured vehicle of $445 in nominal dollars. In 1989, 75% of insured vehicles carried collision coverage and 78.2% of the total carried comprehensive coverage. The percentage of insured vehicles carrying specified perils coverage dropped to 9% which showed that more consumers had moved to comprehensive coverage.[7]

1. PREMIUMS

The historical review showed dramatic increases in premiums in two intervals between 1972-1989. The first such interval was between 1974-1977. The average premium for all coverages increased from $145 in 1974 to $272 in 1977, which represented an increase of 23.4% per year, or 13% per year after adjustment for inflation. The second interval of significant increase was between 1980 and 1983. The average premium increased in this interval at a rate of 15.7% per year. This rate of increase in premiums after adjustment for inflation was less than 1 percent.

Figure 1 displays the changes in the average premium per vehicle insured with all coverages combined. The changes are shown in nominal dollars over the period between 1972 and 1989. Figure 2 shows the same premium changes when indexed for inflation. Figure 2 illustrates strong swings over time in the price of insurance per vehicle. The highest point in pricing occurred in 1977. After pricing reached that pinnacle, there was a steady decline until 1989.

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[6] Authority for these methods was found in The Osborne Report, fn 3, supra at page 275.

[7] Source: IBC Statistical Data.

The pattern of premium increases for third party liability insurance in Alberta was similar to that of Ontario between 1975 to 1986. Accident benefit premiums in Ontario were relatively unstable, although with less dramatic variations than occurred with third party liability premiums.[8] By contrast, accident benefit premiums in Alberta were stable.

The cost of automobile insurance in Alberta increased by 225% in nominal dollars from 1972 until 1989. However, the cost of living due to inflation in the same period increased by a higher amount of 257 per cent. Thus in constant dollar terms, the average premium in 1989 had actually decreased from the cost in 1972 by 9 per cent. Figure 3 depicts the pattern of premium increases and decreases in the period under review.

2. LOSS COSTS

Figures 1 and 2 also show loss costs per vehicle insured between 1972 and 1989. They show that loss costs, like premiums, increased over time. Moreover, the increases in loss costs were cyclical. Costs tended to decline in Alberta during periods of economic slowdown, and to accelerate rapidly during economic recovery. Figure 2 shows that loss costs, adjusted for inflation, decreased in periods of recession between 1974-76 and 1980-83. Loss costs increased by an average of 10% per year during the oil boom between 1977-1980. The period under review showed little consistency in the frequency of claims.

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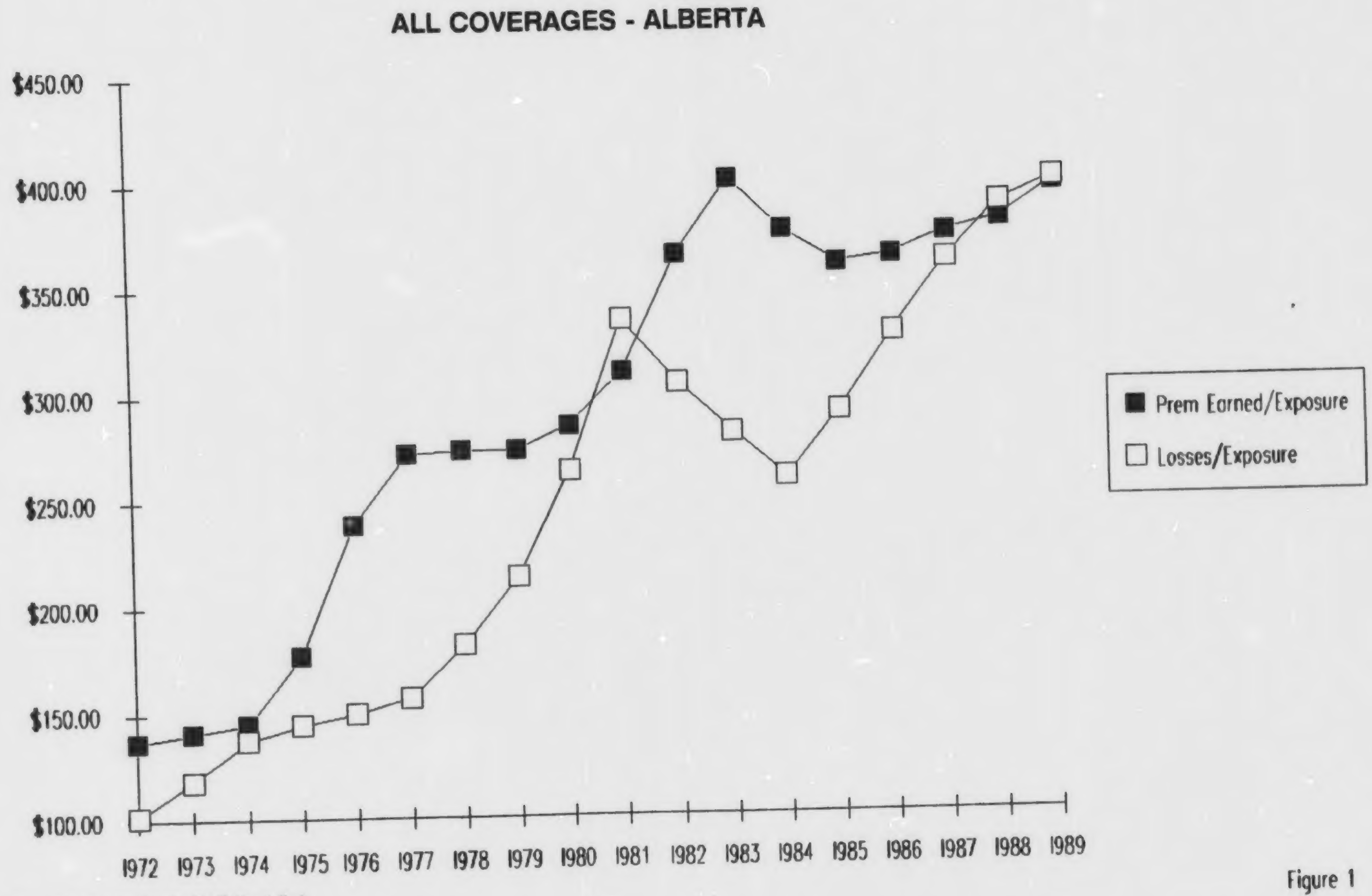
[8] The Osborne Report describes the pattern of premium increases in third party liability and accident benefits, fn 3, supra, at page 277. The IBC Statistical Data was the source of the information for Alberta. The Osborne Report is the source for all information relating to Ontario auto insurance unless specifically indicated otherwise.

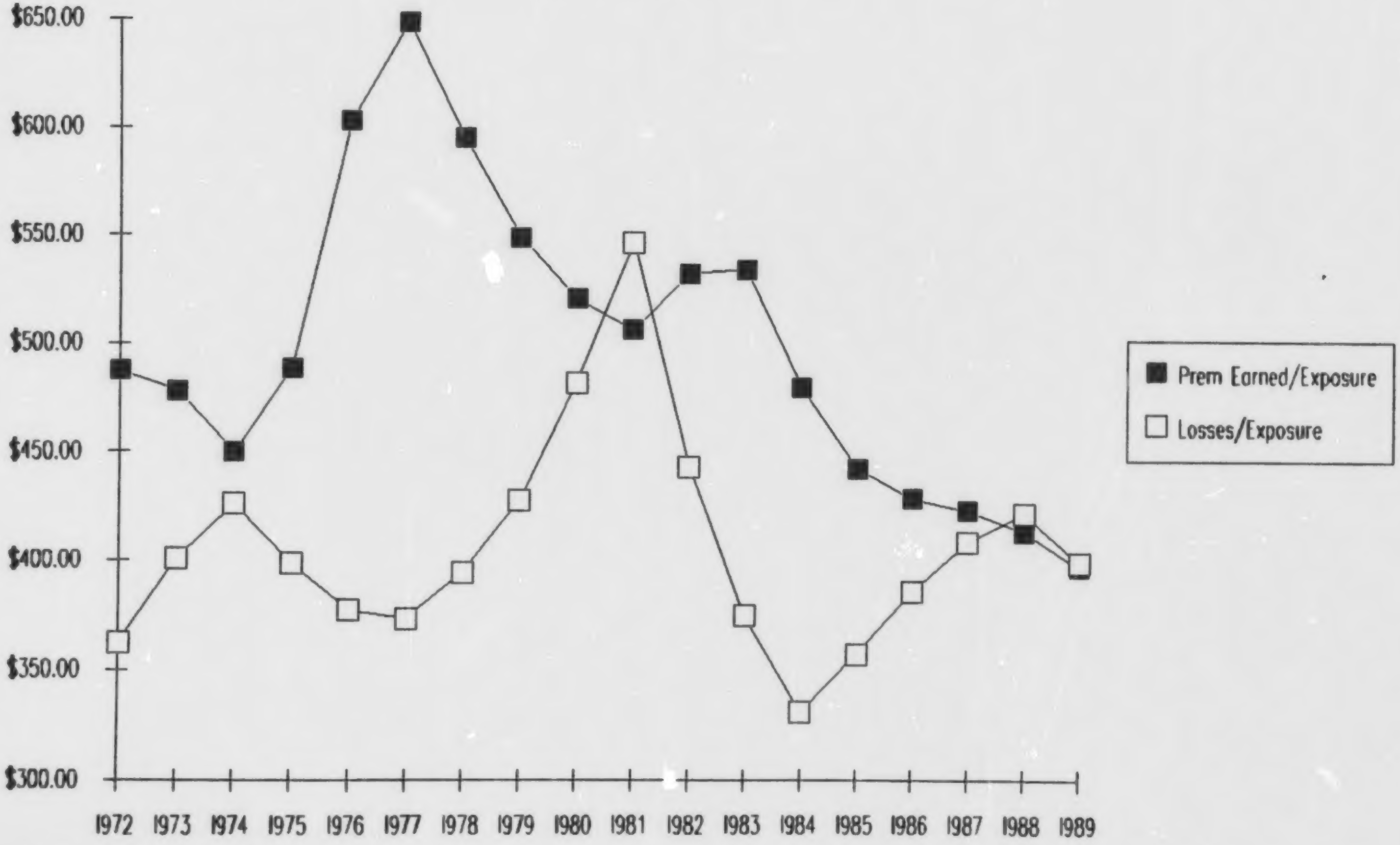


ALL COVERAGES - ALBERTA

Source: IBC Green Book Statistical Data

Figure 1

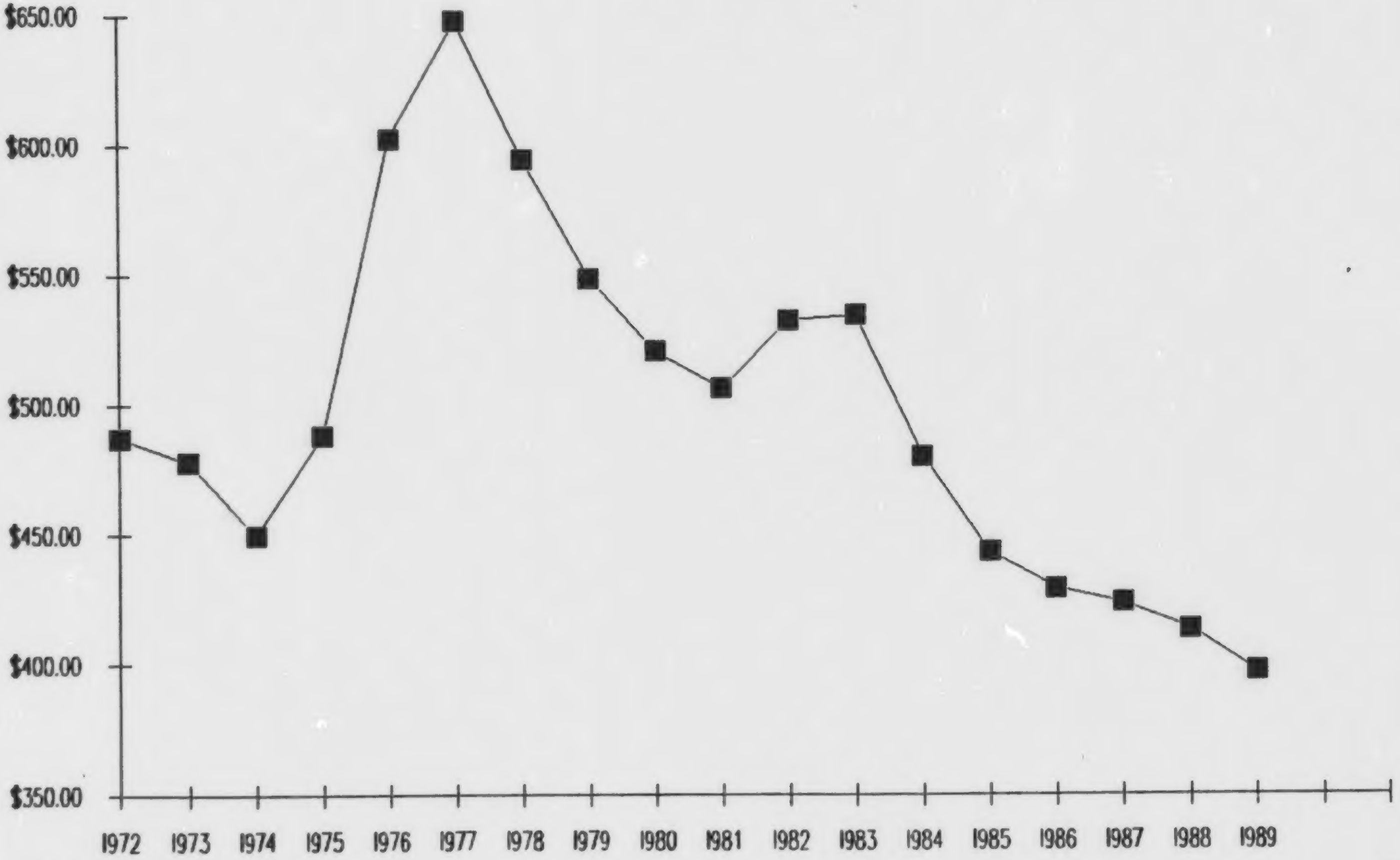
ALL COVERAGES - ALBERTA
(INDEXED)



Source: IBC Green Book Statistical Data

Figure 2

ALL COVERAGES - ALBERTA
(INDEXED)



Source: IBC Green Book Statistical Data

Figure 3

3. THE RELATIONSHIP OF PREMIUMS TO LOSS COSTS

Although both losses and premiums increased over time, premiums typically increased two to three years after loss costs increased. Premiums would continue to increase for two to three years after loss costs had levelled off. Figure 1 illustrates the underwriting cycles of automobile insurance in Alberta between 1972 and 1989. The pattern is one of premium increases lagging increases in loss costs by two to three years. In the recovery phases, competition typically decreases and insurers benefit from redundant premium levels until competitive conditions return to normal. However, in the six to eight years of the declining phase of the most recent cycle, because of competitive pressures, insurers did not increase premiums to adequate levels to meet loss cost levels.

The same pattern emerged across Canada.[9] The Osborne Report found that premiums declined steadily from 1978-1981. It suggested that the decline occurred in Ontario because premiums were too high in relation to expected loss costs at that time. Alternatively, insurers may have become more casual in predicting loss costs because of high interest rates. The study suggested that the decline in interest rates and the increase in bodily injury claims costs compounded the premium problem in 1982-83. It said the increase in bodily injury claims costs was due in part to the impact of the legislative changes which introduced prejudgment interest and the Ontario Family Law Reform Act claims. It suggested that insurers also did not account for the probability that claims costs would increase due to the return to relative economic prosperity from the recession in the early 1980s. It also said the problem perceived by the Ontario government and the public was worsened when a substantial premium increase in 1985-6 was not introduced gradually.[10]

The increase in third party liability loss costs between 1982-1986 in Ontario was due to increases in both frequency and average bodily injury claims costs.[11] Bodily injury frequency had increased by

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[9] Memorandum to the Automobile Insurance Board from Joe Cheng, December, 1990, Alberta Automobile Insurance - A Historical Review.

[10] The Osborne Report, fn 3, supra at pp 283-285.

[11] The Osborne Report, fn 3, supra at p 279.

24% between 1982 and 1986.[12] The Osborne Report cited some thirteen reasons for the increases in bodily injury claims costs.[13] It concluded that insurers were justified in increasing premiums in 1986 because the 1985 loss costs, including operating expense, had exceeded premium levels in 1985.[14]

4. FORCES FOR INCREASES IN LOSS COSTS

Figures 4, 5, 6, 7, 7A, 8 and 8A depict the Alberta trends in claim frequency. There were similar patterns of increases and decreases of loss costs per vehicle throughout the period in each class of coverage. However, there were different forces causing the changes in loss costs in the past two underwriting cycles. An examination of the various classes of coverage reveals these differing forces.

a. Third Party Liability Coverage

Loss costs for third party liability coverage expressed in nominal dollars increased from an average of $89 per vehicle in 1976 to $137 in 1980. Loss costs increased again from $130 in 1984 to $215 in 1989. Figures 7 and 7A depict the frequency and severity of third party liability claims costs. Frequency had declined significantly from 1974 to 1977 and remained relatively stable to 1981 when it declined again. It again remained relatively stable until 1989. From 1982 to 1986, the average size of claim against third party liability coverage increased by over $500 and increased by the same amount again from 1986 to 1989.

Beginning in 1982, the automobile insurance industry differentiated the data on bodily injury costs from the property damage costs of third party liability coverage. However, the data can be considered reliable only from 1983 onward. Figure 9 shows the loss costs for the two kinds of losses separately and combined. The data showed that in nominal dollars, bodily injury loss costs in Alberta between 1983-1989

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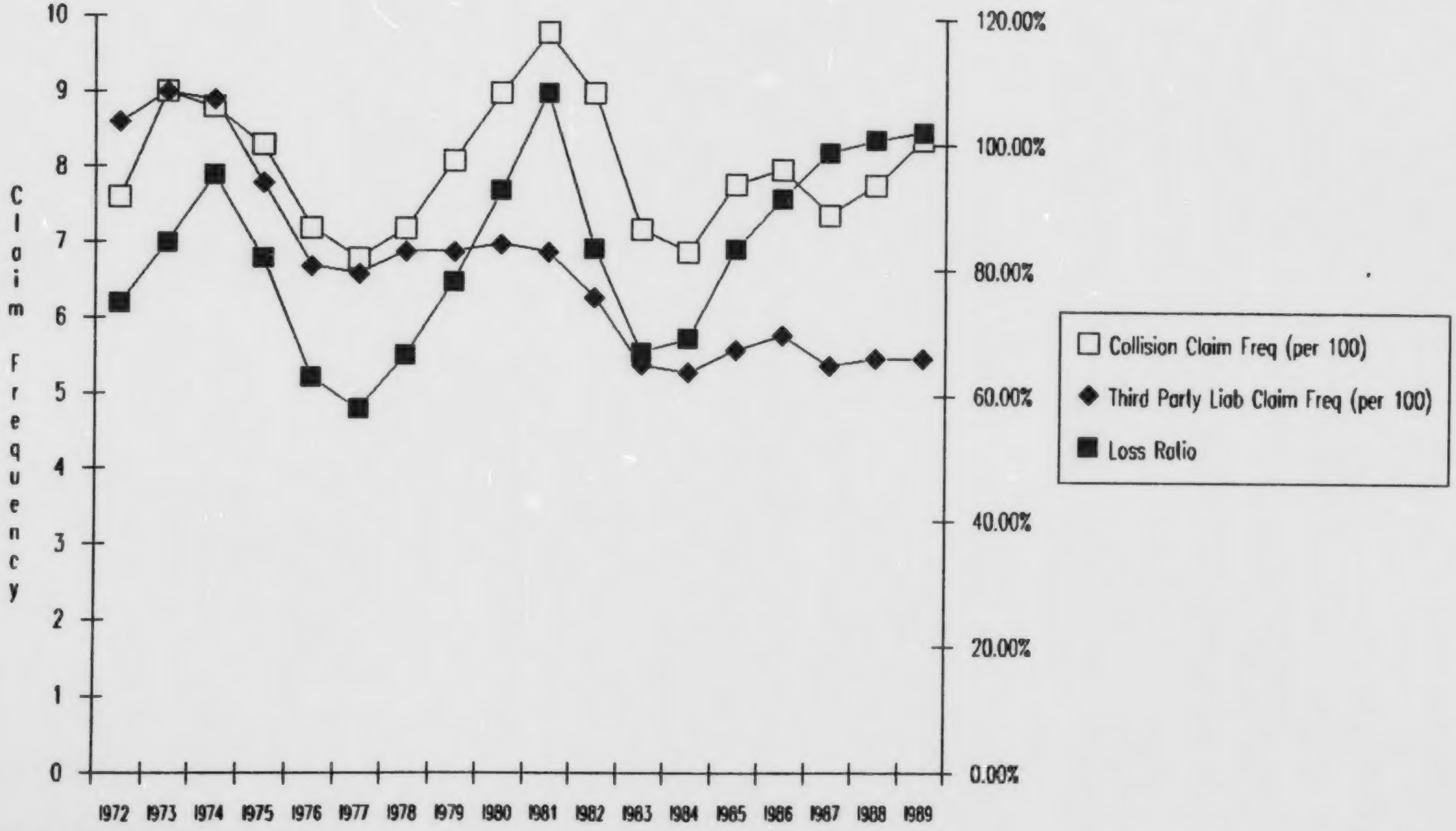
[12] The Osborne Report, fn 3, supra at p 276.

[13] The Osborne Report, fn 3, supra at p 269-275.

[14] The Osborne Report, fn 3, supra, Finding F72 at p 29, pp 283-285 and 294-5.

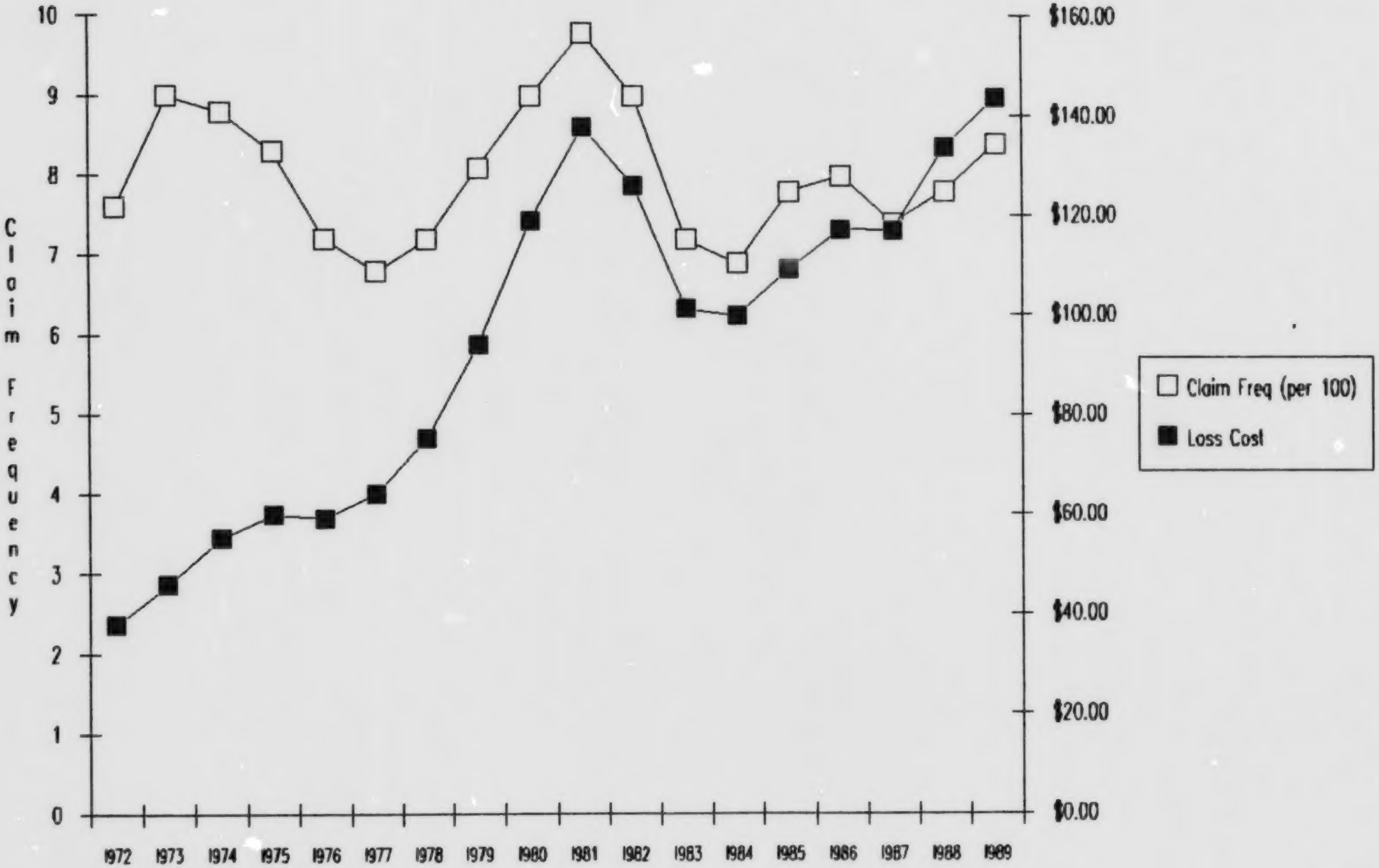
ALL COVERAGES - ALBERTA



Source: IBC Green Book Statistical Data

Figure 4

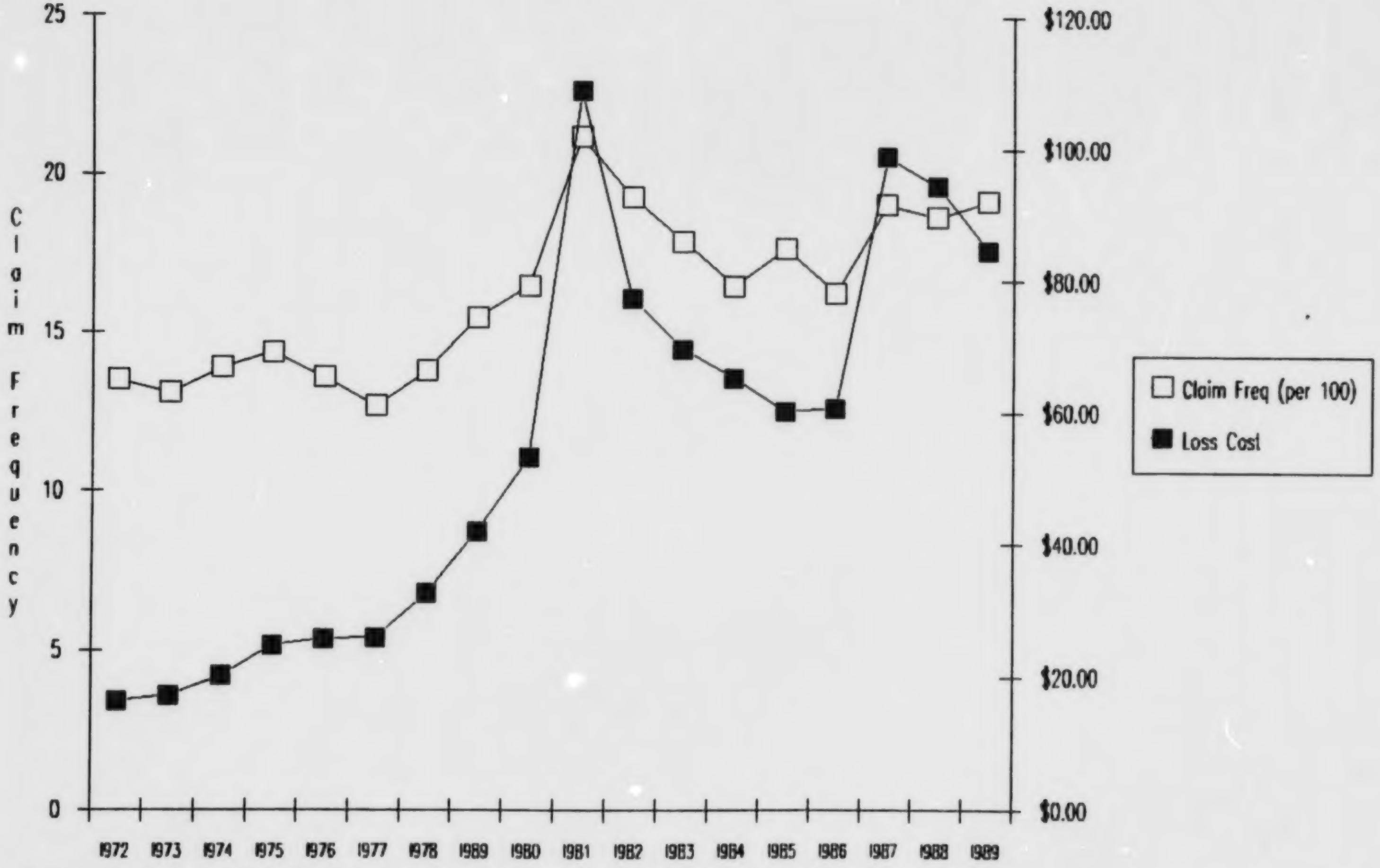
COLLISION - ALBERTA



Source: IBC Green Book Statistical Data

Figure 5

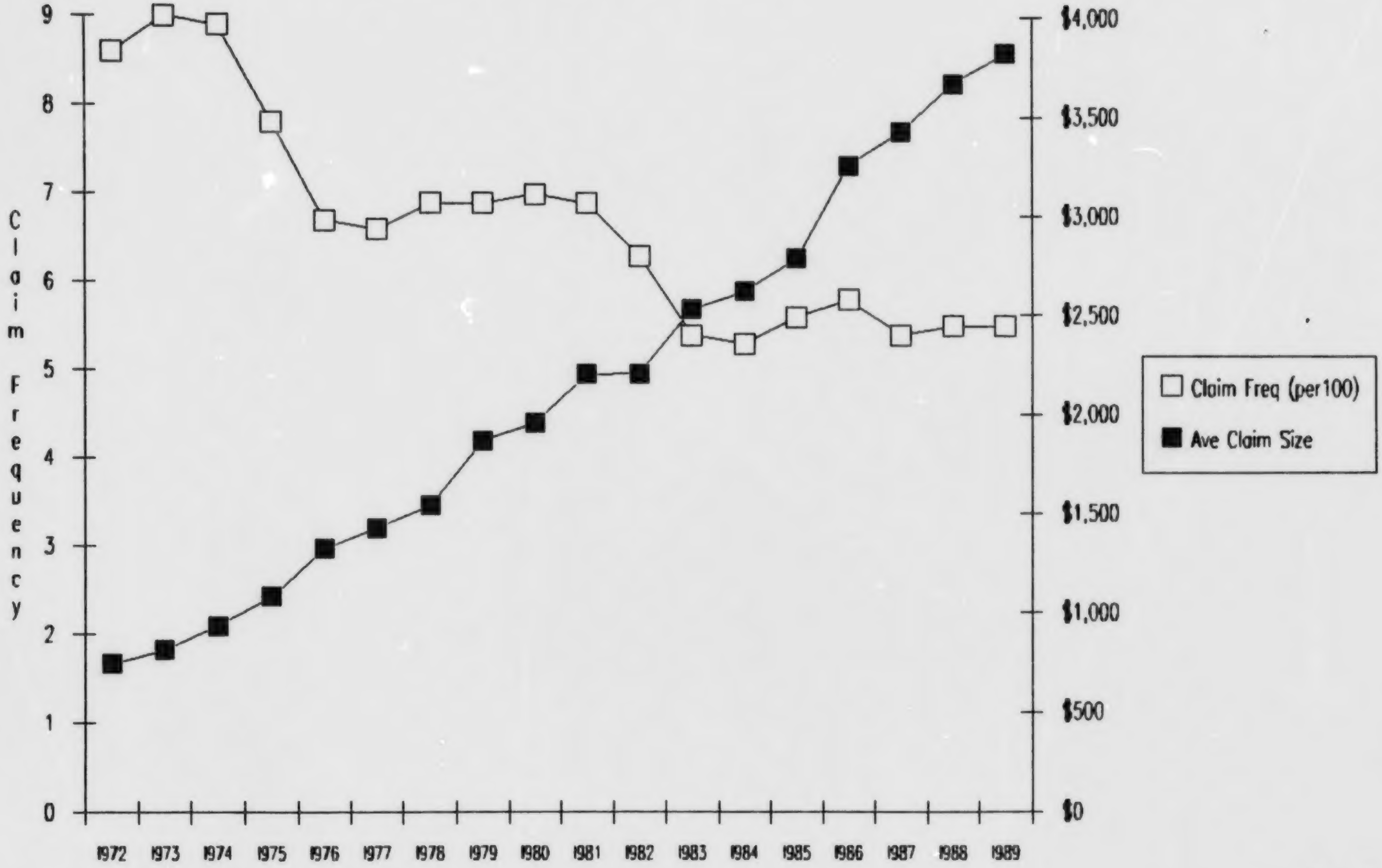
COMPREHENSIVE - ALBERTA



Source: IBC Green Book Statistical Data

Figure 6

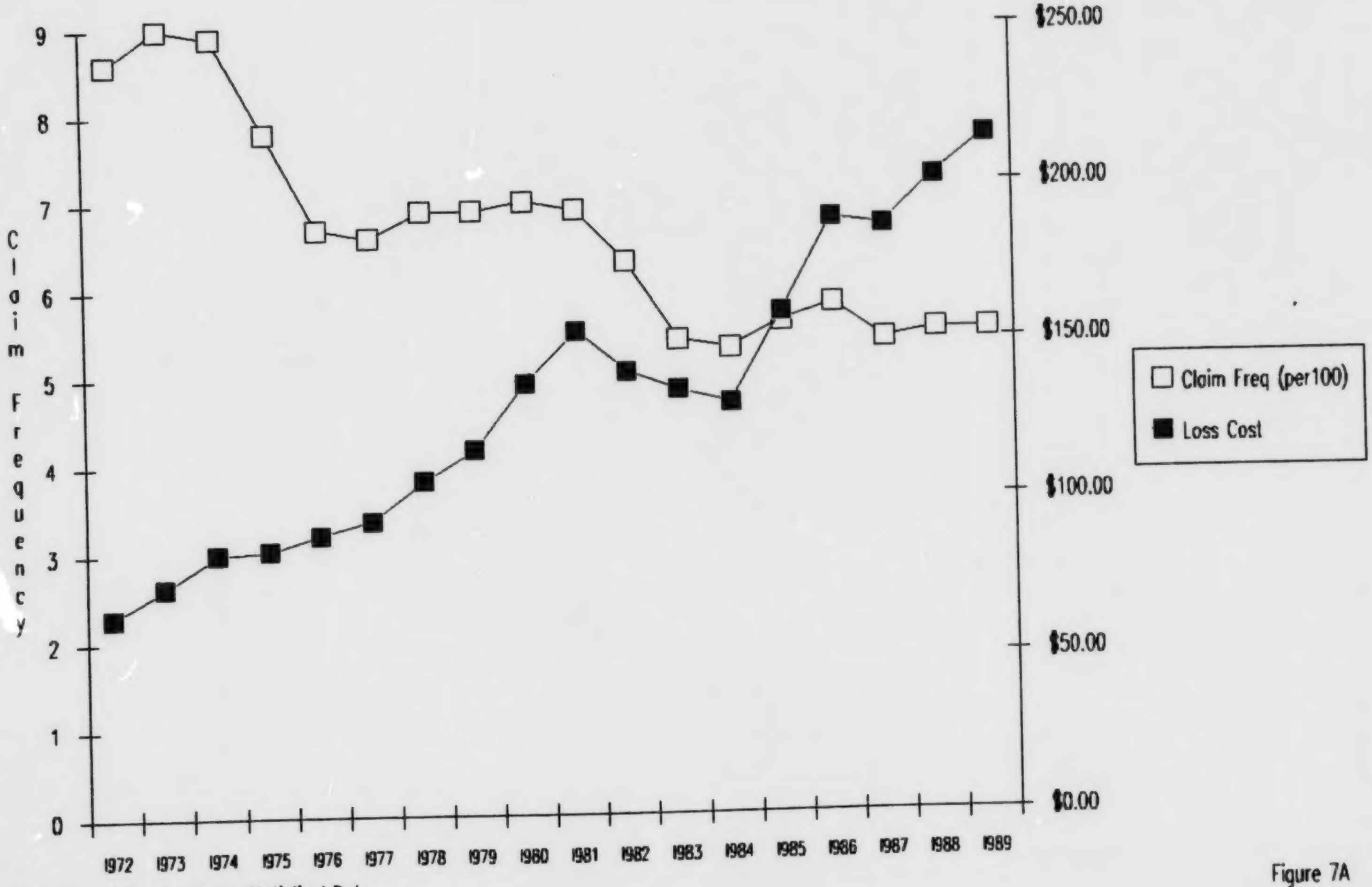
THIRD PARTY LIABILITY - ALBERTA



Source: IBC Green Book Statistical Data

Figure 7

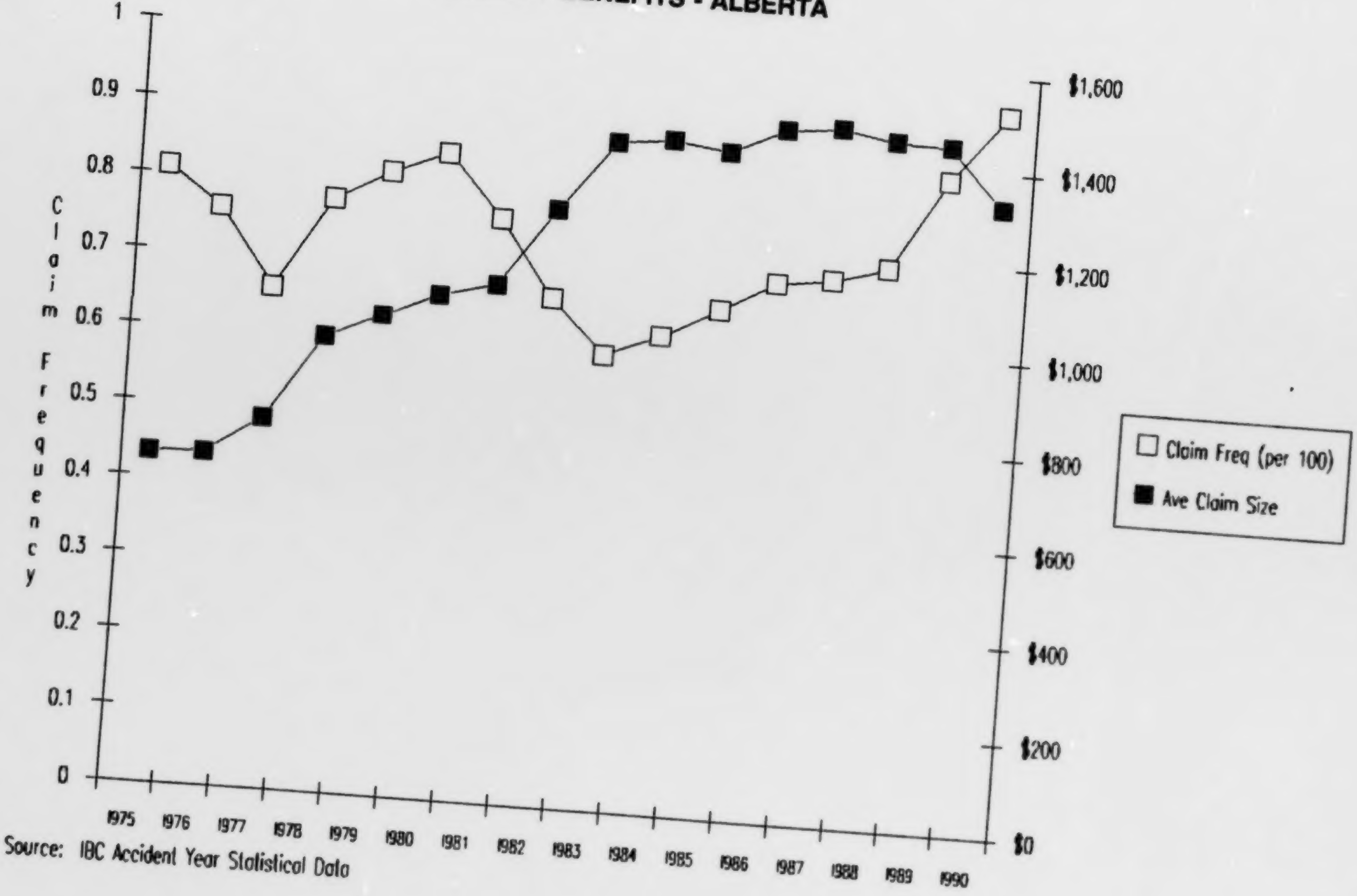
THIRD PARTY LIABILITY - ALBERTA



Source: IBC Green Book Statistical Data

Figure 7A

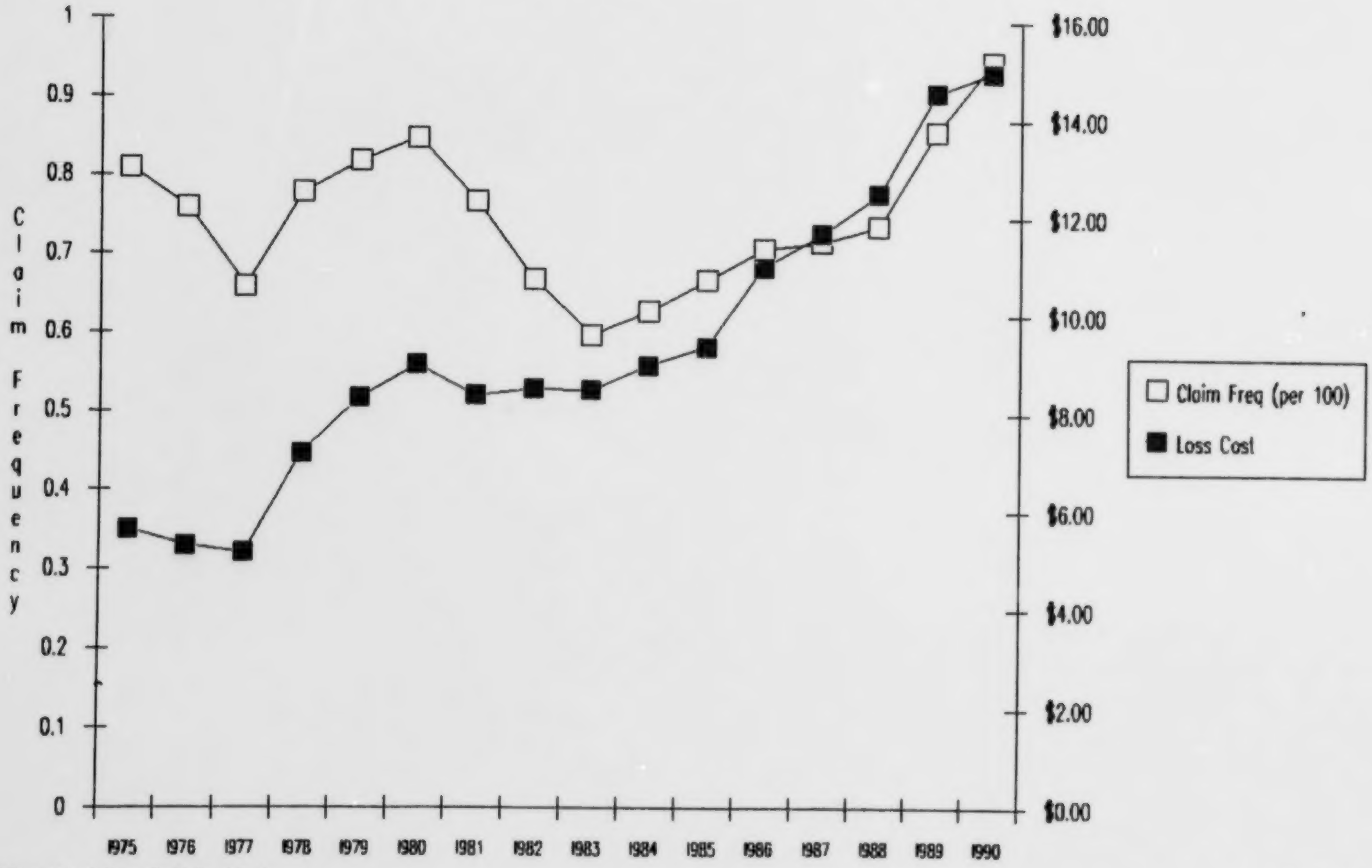
ACCIDENT BENEFITS - ALBERTA



Source: IBC Accident Year Statistical Data

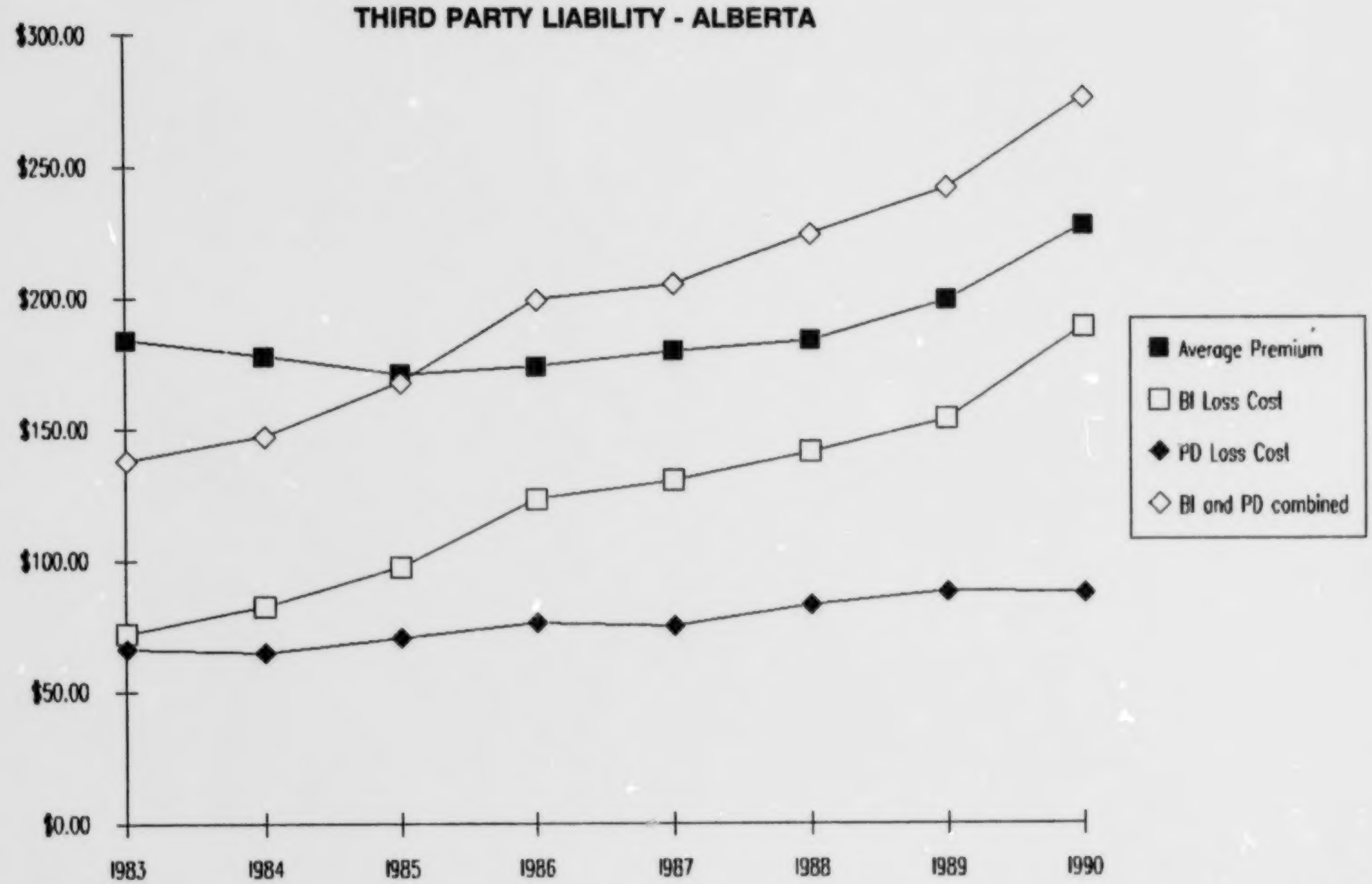
Figure 8

ACCIDENT BENEFITS - ALBERTA



IBC Accident Year Statistical Data

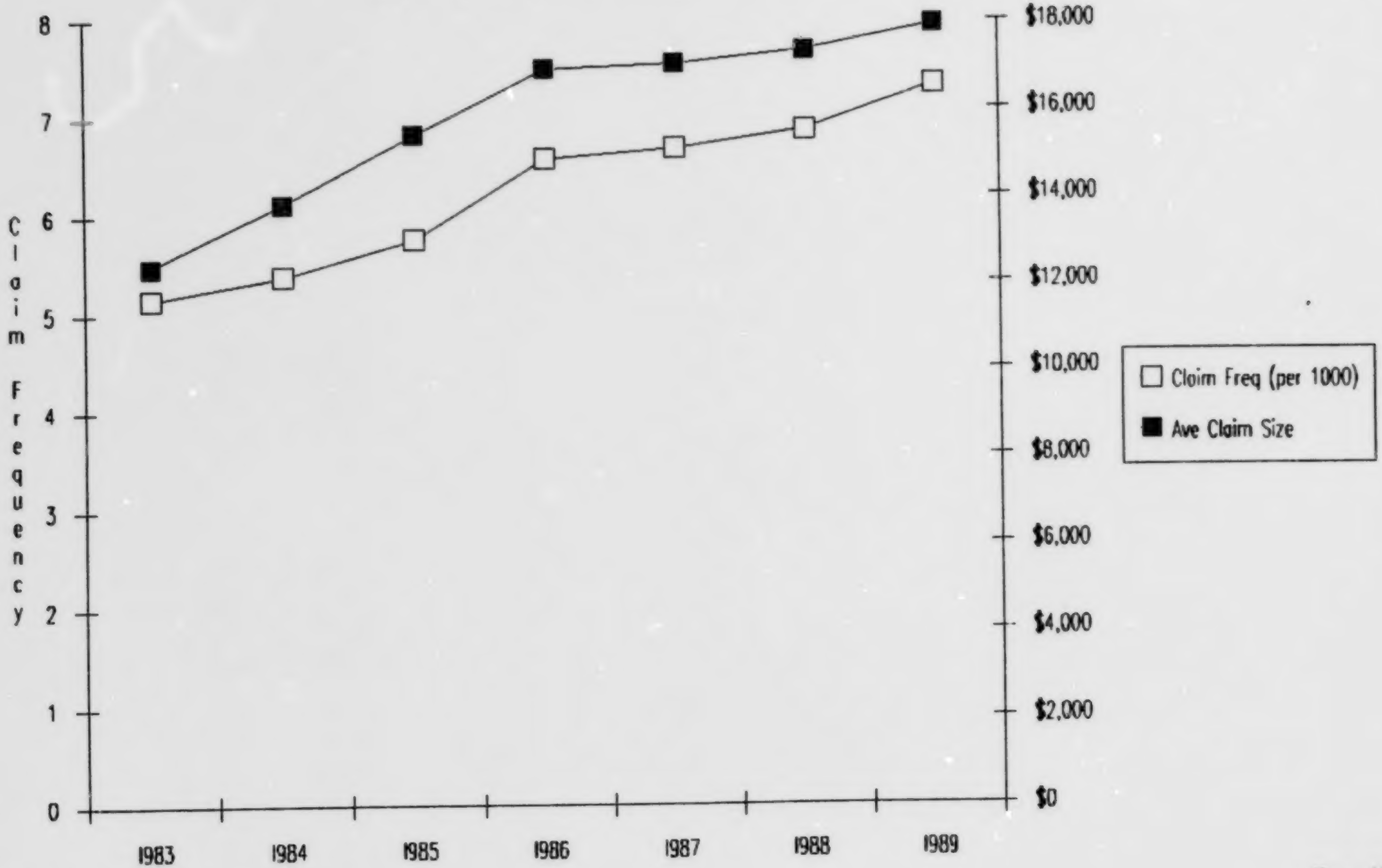
Figure 8A



Source: IBC Accident Year Statistical Data

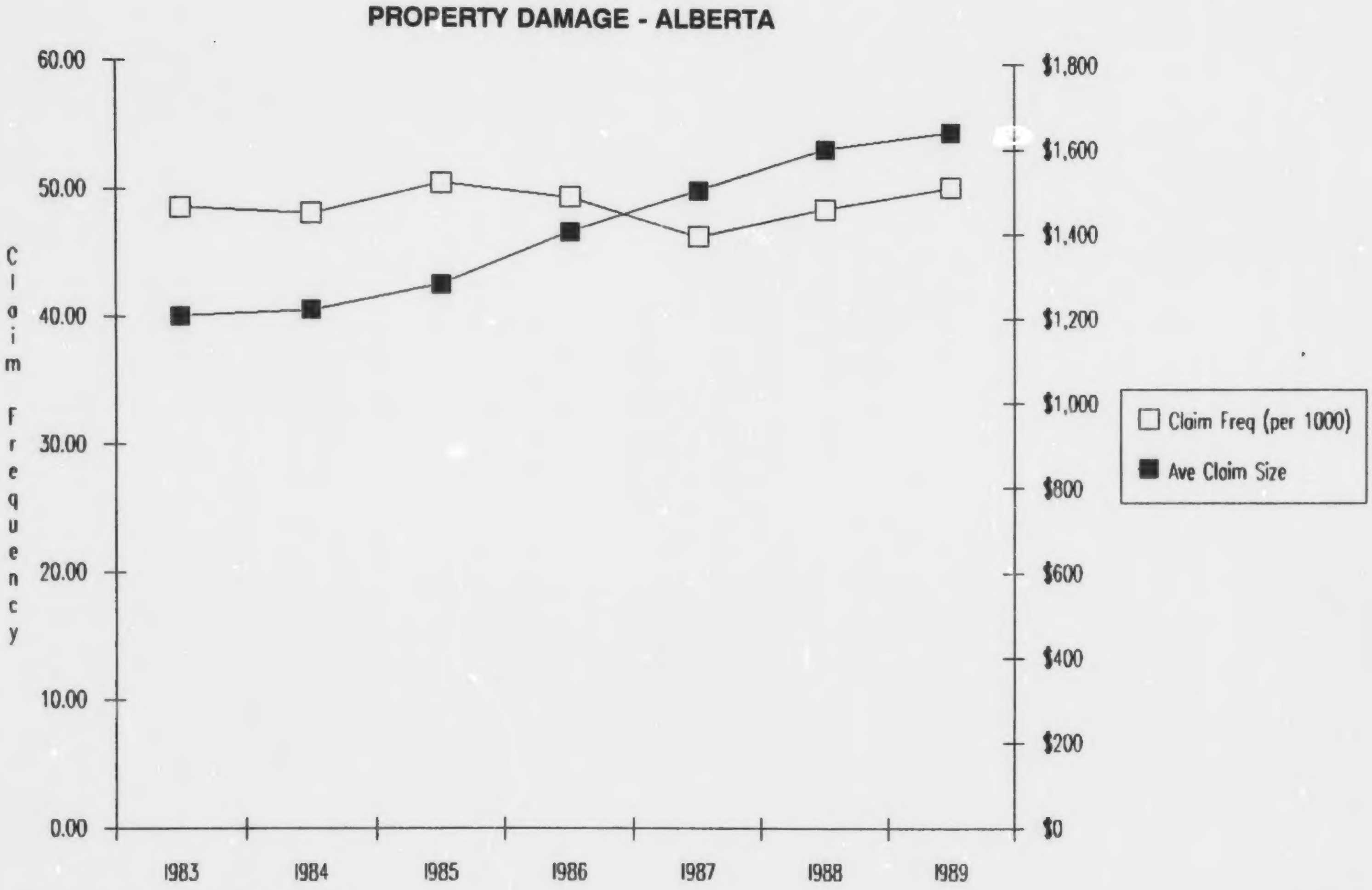
Figure 9

BODILY INJURY - ALBERTA



Source: IBC Green Book Statistical Data

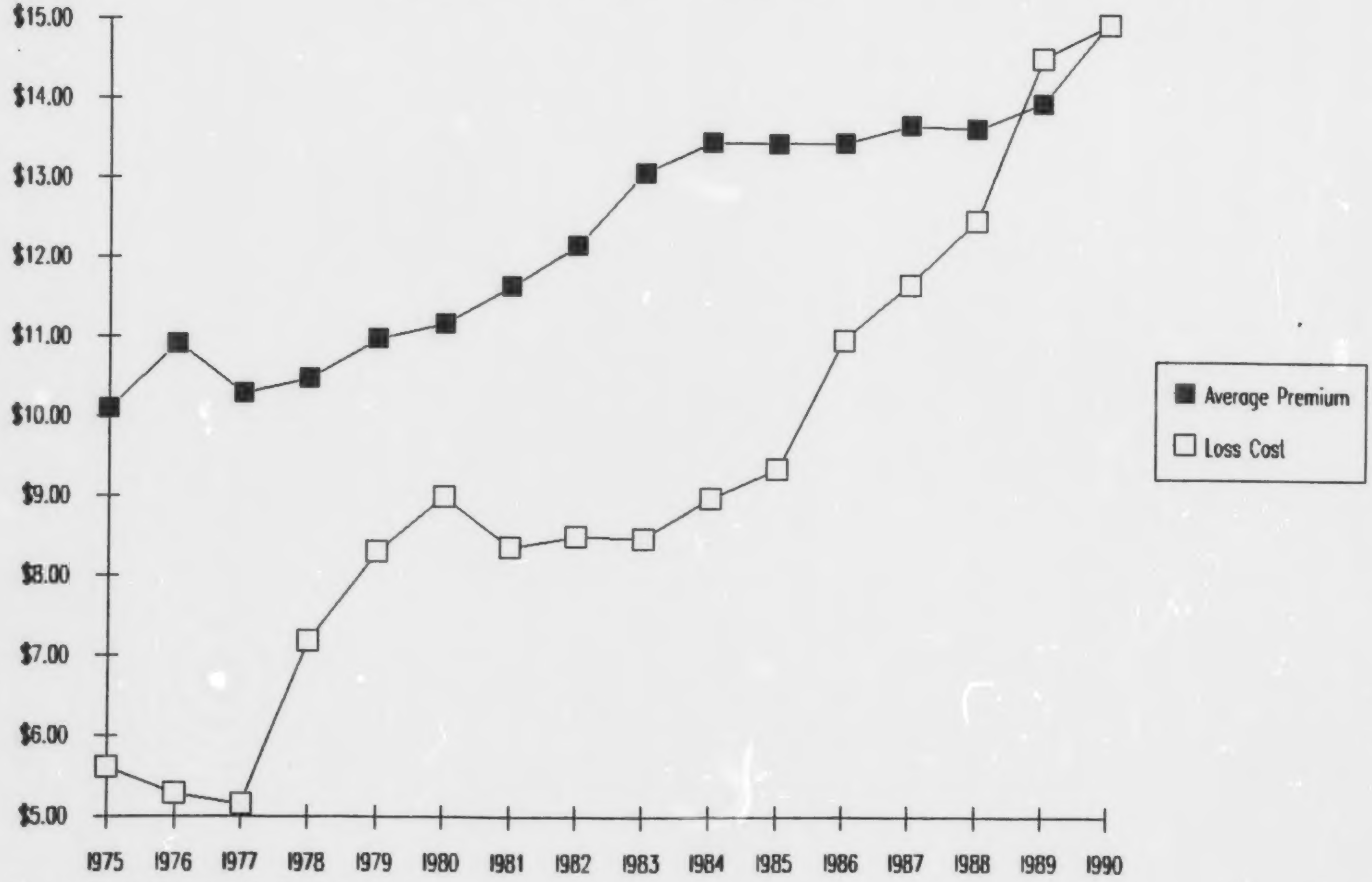
Figure 10



Source: IBC Green Book Statistical Data

Figure 11

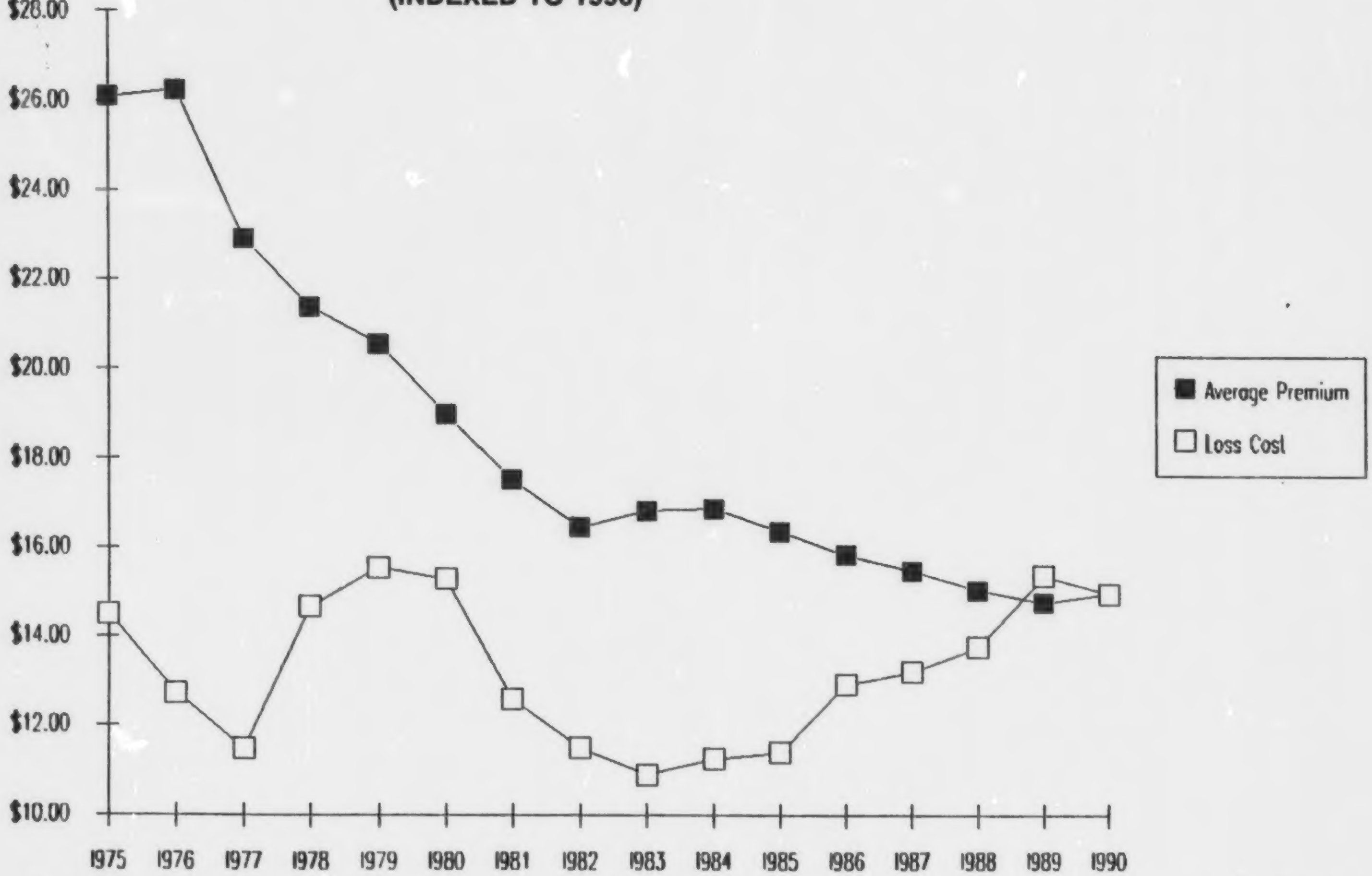
ACCIDENT BENEFITS - ALBERTA



Source: IBC Accident Year Statistical Data

Figure 12

ACCIDENT BENEFITS - ALBERTA
(INDEXED TO 1990)



Source: IBC Accident Year Statistical Data

Figure 12A

had increased by 115 per cent, while property loss costs increased by only 34 percent. The frequency of claims for bodily injury losses had increased in that period by 43 per cent. Figure 10 shows these increases. By contrast, Figure 11 shows the frequency for property damage losses had remained stable.

Thus it was the increases in severity and frequency of bodily injury claims that caused the most significant increases in loss costs in third party liability insurance between 1983 and 1989.

b. Accident Benefits

The automobile insurance industry first offered accident benefits in 1972. These benefits consist of a prescribed schedule of first party payments for injured persons regardless of fault. There has been only modest upgrading of these benefits since 1972. The current benefits appear in Exhibit 1.

Figures 12 and 12A show the trends for accident benefits between 1975 and 1990. Average loss costs for accident benefits were less than $6 in nominal dollars per insured vehicle in 1975. By 1990, they had increased to an average of $15 per insured vehicle. The average premium in nominal dollars increased from $10 in 1975 to $15 in 1990. Figure 12 shows the trends in nominal dollars. However, Figure 12A shows that in constant dollars, average loss costs decreased from $15 in 1975 to $11 in 1983, and returned to the level of $15 in 1990.

Figure 8 shows that the value of the average claim cost increased steadily from $694 to $1,325. Figures 8 and 8A show that frequency varied in the early part of the period. However after 1983, frequency increased steadily.

The relative stability in accident benefits premiums may have been due to the modest level of benefits historically available. The stability also could have been due to the existence of collateral benefits provided by employers of injured persons which replaced some of the incurred losses.

c. Optional Coverages

There had been increases in loss costs for collision, comprehensive and specified perils coverage from 1972-1989. Loss costs for collision coverage doubled from $60 in nominal dollars per insured vehicle in 1976 to $120 in 1980. Losses for comprehensive coverage increased from $25 per insured vehicle in 1976 to $53 in 1980. The increases became more gradual from 1984 to 1989.

After decreasing to $100 by 1984, collision loss costs increased to $144 in 1989, and comprehensive loss costs increased from $65 in 1984 to $85 in 1989. Figures 5 and 6 show frequency in optional coverage damage claims had increased only slightly, and the cost increases were relatively stable.

5. ANALYSIS

This review shows that historically, there has not been premium stability in automobile insurance in Alberta. Premium increases have lagged loss costs by 2 to 3 years. Thus, in some intervals insurers have enjoyed premium levels that outstripped loss costs by significant proportions. In other intervals, they have suffered large losses. The losses result from the uncertainty involved in predicting the likely cost of insurance in future years. Yet in constant dollars, the insurance premium steadily declined for some years. At the end of the period, the premium in constant dollars was lower in 1989 than at any time in the previous 17 years.

Between 1972 to 1989, automobile insurance costing was typically cyclical. There was an inverse relationship between economic conditions and loss costs. The claims frequency altered with the economic cycle. It increased with economic prosperity and declined in concert with slowdowns in economic growth. However, the price of automobile insurance in Alberta increased significantly in only two intervals of that period.

In the late 1970s, vehicle damage claim costs caused the increases in loss costs. However, by the end of the 1980s, the vehicle damage claim costs had levelled off. After 1983, the increase in severity of bodily injury claims was the primary reason for the increase in loss costs. This increase created new pressure on premiums.

The Board concluded that the increases in premium and loss costs in Alberta occurred for reasons different from the case in Ontario. For example, Alberta was not experiencing significant economic prosperity in the years in which claims costs were increasing. Alberta did not enact legislation similar to the Ontario Family Law Reform Act. Premiums were not high in relation to loss costs in 1985.

On the other hand, some conditions did resemble the characteristics of the automobile insurance problem in Ontario. Frequency and severity of accidents were increasing at a dramatic rate continuously after 1983. Insurers in the late 1980s became caught with accumulated premium deficiencies in the face of significant increases in loss costs. In the Board's view, the intense competition among insurers during the 1984-1989 period prevented applications for premium increases commensurate with expected increases in loss costs. As a result, Alberta motorists enjoyed a vacation from premium increases that would have been justified, but were not sought by insurers in those years.

In summary, while there was a lack of premium stability in automobile insurance in this period, Alberta motorists in 1989 received a more extensive insurance product and at a lower price in constant dollars than they did in 1972. The Board concluded that the automobile insurance system served Alberta motorists well during this period.

However, at the end of this period, loss costs were continuing to increase due to increases in severity and frequency of bodily injury claims. Several insurers applied for premium increases following examination of the 1988 results.

Against this background, the Board examined premiums and loss costs between 1988 and 1990.

B. REVIEW OF CURRENT INSURANCE PREMIUM AND COST LEVELS BETWEEN 1988 - 1990

The study of current claims costs was performed with reference to claims files of certain automobile insurers[15] who conduct business in Alberta. All participants completed the claims survey forms appropriately and at their own cost. The study would not have been possible without their cooperation. The data were considered in the context of automobile insurance premiums and loss costs between 1988 and 1990.

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[15] A list of the insurers selected to participate in the survey is found in Appendix 1.

1. REPORT ON ALBERTA MOTOR VEHICLE CLAIM SURVEY

The Board's consulting actuary conducted a survey of bodily injury claims and a survey of accident benefits claims. The surveys examined Alberta claims in the years 1988 and 1990. The claims were selected randomly from an appropriate distribution throughout the province.

The surveys determined characteristics about the persons who received compensation, the amounts of compensation paid, the breakdown of compensation paid through first and third party automobile insurance for bodily injury claims, and the sources of compensation. The surveys sought information about transaction costs and the timeliness of compensation payments.

As the surveys concerned only closed claims, the issue of reserves was not relevant. The bodily injury claims survey analyzed up to 1340 claims files closed in 1988 and 1990. The accident benefits survey analyzed a total of 1260 files closed in 1988 and 1990.

The surveys probably did not capture complete evidence of collateral benefits payments for two reasons. First, insurers are not entitled to deduct collateral source benefits from third party claims. Thus they may not have determined the existence of collateral benefits in many injury claims. Second, even where the insurers may have documented such information, the Board expects that not all claimants reported receipt of all benefits provided by their employers and other sources.

The surveys did not fully capture the entire spectrum of legal expenses. While the data reflect some payments of party and party costs,[16] the entire amount of the payment of legal fees to claimants' lawyers is unknown. Thus the data do not fully or separately show the part of claims settlements representing legal expenses only.

The information collected was neither uniform nor complete in all cases. However, the Board considered the conclusions drawn from the 1990 files and the total cost figures from the 1988 files to be reasonably reliable. The results of the claims survey data appear below.

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[16] Party and party costs are expenses paid or payable by a litigant for appearing or carrying on as a party to a proceeding. The Court may award party and party costs in its discretion or order that the costs be payable according to a taxation pursuant to Schedule C of the Alberta Rules of Court. See Rules 600-612, Alberta Rules of Court. In this report, the term party and party costs refers only to taxable legal costs recoverable by a claimant's lawyer.

a. What is the profile of persons compensated under the current system?

The data showed that most claimants for tort and accident benefits under the current system seek compensation for soft tissue injuries. Most claimants work full time. Most claimants are not at fault for their injuries.

Over half of the claimants had soft tissue injuries. This group received about 25% of the total claims dollars. About 10% of claimants had permanent injuries. About 3% of claimants had permanent and total disability. Although the catastrophic injury cases made up only 1.7% of the claims in the survey, they accounted for almost 40% of the total loss costs in the sample. The data showed that two thirds of the claimants for tort and accident benefits worked full-time. Other classes of claimants in small, relatively equal percentages included the following:

(i) persons employed part-time,
(ii) students over the age of 16,
(iii) retired,
(iv) unemployed,
(v) homemakers,
(vi) preschoolers, and
(vii) others.

About two thirds of the injured claimants, including passengers and pedestrians, were not at fault for their losses. As such, they may have had the right to claim for both tort and no fault benefits.

b. What were the characteristics of payment of compensation?

Accident benefits payments are available to all claimants irrespective of fault. Where a claimant can show all or some of the fault was that of another person covered by automobile insurance, such a claimant may also claim tort benefits from the tortfeasor's insurer. The data showed that the compensation for personal injuries varied significantly. The extent of compensation depended whether the injured party had a tort claim. The survey results illustrate the variations in recovery between the tort and no fault sides of the existing automobile insurance system.

(I) Bodily Injury Claims Survey Results

(a) What was the nature of the compensation paid?

The data provided important facts about bodily injury claims made when a tort action was available. The first important facts appear in the breakdown of costs of bodily injury claims resolved by way of settlement of judgment after trial. Figures 13 through 16 show the judgment or settlement bodily injury claims cost breakdowns.

Figure 13 shows the breakdown calculated on the basis of all surveyed claims. It is important to note that non-pecuniary general damages consumed 47.7% of all claims settlement dollars.

Figure 14 shows the breakdown calculated for claims between $1 and $10,000. In this class of minor claims, non-pecuniary general damages accounted for 83.1% of the claims settlement dollars. The next largest claims in this class were for past lost wages and out-of-pocket expenses, followed by party and party costs and judgment interest.

Figure 15 represents the breakdown calculated for claims between $10,001 and $75,000. Non-pecuniary general damages claims accounted for 57.1% of the claims settlement dollars. Figure 15 shows that the descending order of claims matches the proportions seen in the class of claims depicted in Figure 14.

Figure 16 shows the breakdown calculated for claims over $75,000. In this class of claims, non-pecuniary general damages comprised only 18.2% of the claims settlement dollars. The largest part of claims settlement dollars in this class pays claims for loss of future employment income. Non-pecuniary general damages is the next largest payment in this class. The third largest claims are made for payments for past lost wages and cost of future care. The payments made in this class for out-of-pocket expenses slightly exceed the claims for party and party costs and prejudgment interest.

The data displayed in Figures 13 through 15 show that non-pecuniary general damages represent the most significant component of bodily injury claims payments. They also show that the higher the value of the total claim, the smaller is the percentage of payment for non-pecuniary general damages.

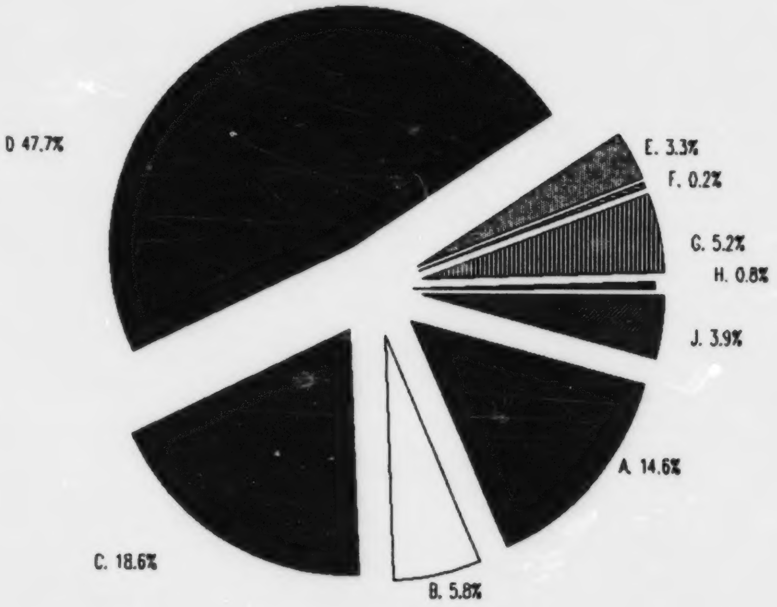
BREAKDOWN OF JUDGMENT/SETTLEMENT

Bodily Injury Claims: All Claims
Alberta: 1990

A.	Loss of Employment Income	14.6%
B.	Out of Pocket Expenses	5.8%
C.	Future Employment Income	18.6%
D.	Non-Pecuniary General Damages	47.7%
E.	Future Care Costs	3.3%
F.	Fund Management	0.2%
G.	Party and Party Costs*	5.2%
H.	Gross-up for Tax	0.8%
J.	Prejudgment Interest	3.9%
	Total**	100.1%

* Note: Party and Party Costs for Claimants represented by Counsel have been adjusted if entered as zero

** due to rounding may not equal 100%



Source: Claim Survey

Figure 13

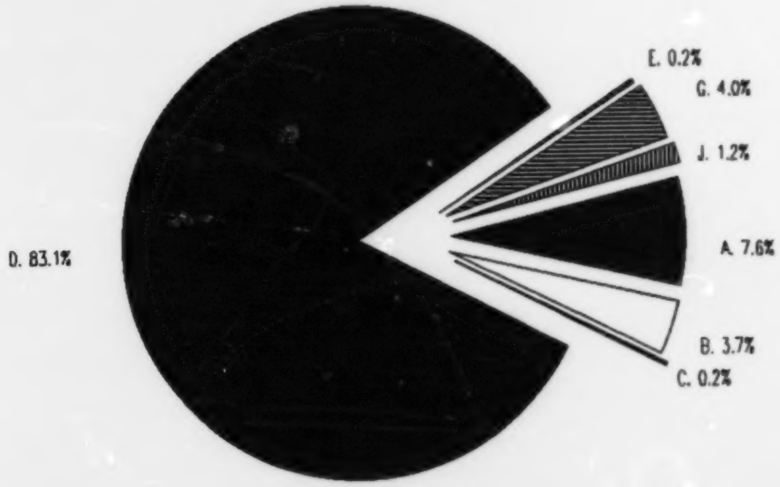
BREAKDOWN OF JUDGMENT/SETTLEMENT

BODILY INJURY CLAIMS: $1-$10,000
ALBERTA: 1990

A.	Loss of Employment Income	7.6%
B.	Out of Pocket Expenses	3.7%
C.	Future Employment Income	0.2%
D.	Non-Pecuniary General Damages	83.1%
E.	Future Care Costs	0.2%
F.	Fund Management	0.0%
G.	Party and Party Costs*	4.0%
H.	Gross-up for Tax	0.0%
J.	Prejudgment Interest	1.2%
	Total**	100.0%

* Note: Party and Party Costs for Claimants represented by Counsel have been adjusted if entered as zero

** due to rounding may not equal 100%



Source: Claim Survey

Figure 14

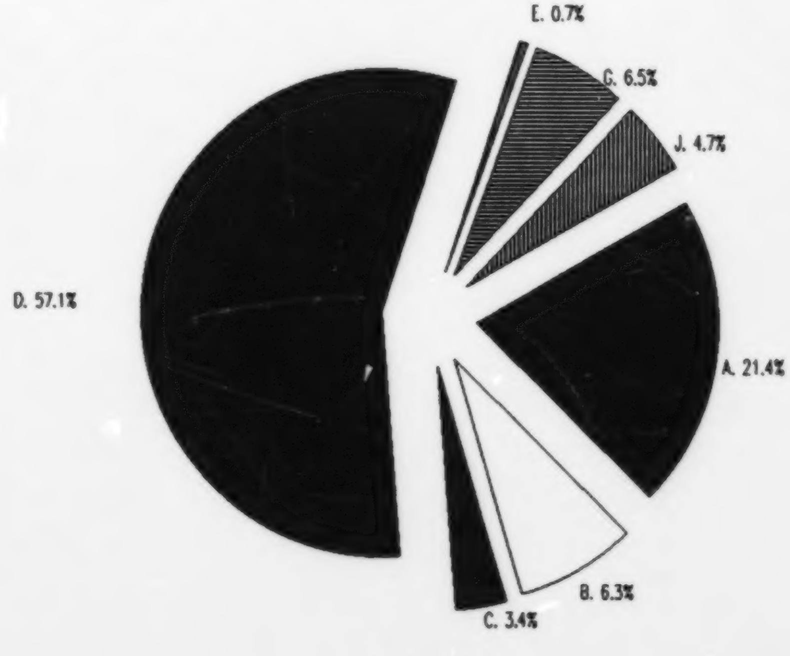
BREAKDOWN OF JUDGMENT/SETTLEMENT

BODILY INJURY CLAIMS: $10,001-$75,000
ALBERTA: 1990

A.	Loss of Employment Income	21.4%
B.	Out of Pocket Expenses	6.3%
C.	Future Employment Income	3.4%
D.	Non-Pecuniary General Damages	57.1%
E.	Future Care Costs	0.7%
F.	Fund Management	0.0%
G.	Party and Party Costs*	6.5%
H.	Gross-up for Tax	0.0%
J.	Prejudgment Interest	4.7%
	Total**	100.1%

* Note: Party and Party Costs for Claimants represented by Counsel have been adjusted if entered as zero

** due to rounding may not equal 100%



Source: Claim Survey

Figure 15

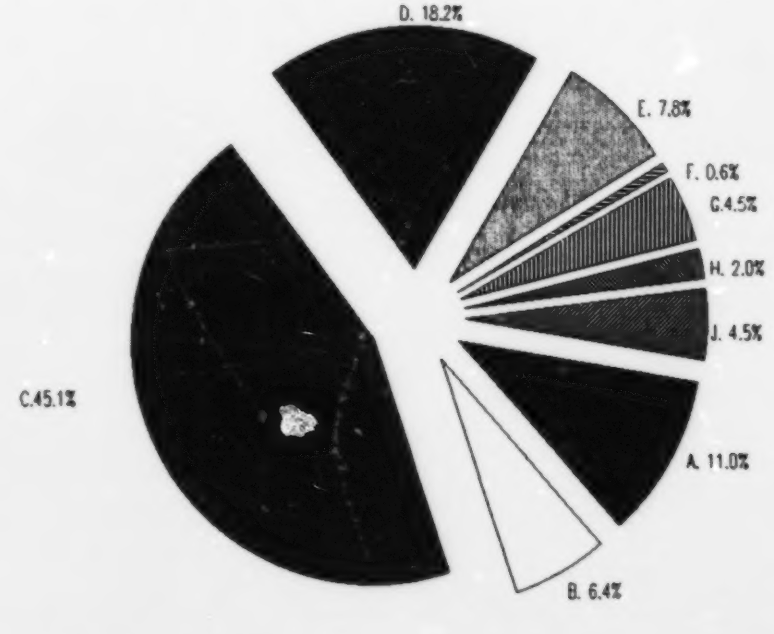
BREAKDOWN OF JUDGMENT/SETTLEMENT

BODILY INJURY CLAIMS: over $75,000
ALBERTA: 1990

A.	Loss of Employment Income	11.0%
B.	Out of Pocket Expenses	6.4%
C.	Future Employment Income	45.1%
D.	Non-Pecuniary General Damages	18.2%
E.	Future Care Costs	7.8%
F.	Fund Management	0.6%
G.	Party and Party Costs*	4.5%
H.	Gross-up for Tax	2.0%
J.	Prejudgment Interest	4.5%
	Total**	100.1%

* Note: Party and Party Costs for Claimants represented by Counsel have been adjusted if entered as zero

** due to rounding may not equal 100%



Source: Claim Survey

Figure 16

(b) How were claimants compensated for economic losses?

Employed claimants who were neither totally at fault nor permanently injured received an average settlement sum of $15,842 in 1988 to 1990. The insurer for the party at fault paid about 92.5% of the settlement sum. These claimants received about 6.2% from their own automobile insurer and 1.2% from their employer. Unemployment insurance benefits accounted for 0.1% of that settlement sum.[17]

Employed persons with non permanent disabilities sustained an average wage loss of $6,991 and out-of-pocket expenses in an average sum of $1,130. They recovered an average of $5,194 or 74.3% of their wage losses from all sources. The recovery on average of 74.3% is considered to be very good for three reasons. First, there are cases where the claimant contributed to his injuries by his own negligence. As such, his recovery should be reduced by the proportion of the losses for which he would be found liable. However, settlement of his claim for lost wages might occur without regard to the possibility that he could be partly liable for his injuries and thus he might not recover the full amount of his wage loss in a trial of the action. Second, claimants receive a greater recovery of lost wages under the tort system than they would have earned from employment had they not been injured. This result occurs because the tort system does not take account of tax and compensates on the basis of loss of gross wages. In the real world, employees receive wages net of tax. Third, a claimant may recover losses from a private insurance plan or from his employer as well as from the tortfeasor's insurer.[18] For these reasons, the average recovery of economic loss of 74.3% suggests that many claimants in this class receive full or more than full compensation for their economic losses.

After subtraction of payment of economic losses, employed claimants with non permanent injuries received an average award for non-pecuniary general damages of $9,503. This award exceeds the amount of the award for the average wage loss in this class of injuries. Assuming the average annual wage earned by an Albertan in 1988 to 1990 in the range of $24,000 to $27,000,[19] the average wage loss resulting from a traffic accident would equal about three months of lost wages. In effect, the compensation for non-pecuniary general damages produces a sum which in total provides the claimant with more than twice the amount of his actual wage loss.

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[17] Claim Survey, fn 1, supra, p 11.

[18] It was established by Boarelli v. Flanagan, [1973] 3 O.R. 69 that an award for damages will not be reduced where the plaintiff has recovered benefits from some alternative collateral source.

The no fault feature of the automobile insurance system does not pay injured claimants non-pecuniary general damages for pain and suffering or loss of enjoyment of life. To make an economic comparison between the compensation received under tort and that received under the no fault feature of an automobile compensation system, we convert the non-pecuniary general damage benefits to equivalent economic benefits. Under this economic analysis, the average claimant, neither at fault nor permanently injured, received 100% of his wage loss under the tort side of the current system. He received income replacement from the tort system in an amount equal to 59.4% of the wage loss. He received further income replacement in an amount equal to 14.9% of the wage loss from accident benefits paid by his own automobile insurer, from benefits received from his employer, and from the Unemployment Insurance Commission. The award for non-pecuniary general damages was equivalent to 135.9% of the wage loss. The total benefits received, excluding payment of medical and out-of-pocket expenses, equalled an average payment of $14,712. This last sum would equal 210.4% of his wage losses.[20]

Permanently injured and totally disabled claimants who had been employed before the loss received a total average settlement award of $51,732. Medical and out-of-pocket expenses accounted for about $7,854 of the total settlement. The balance paid for past and future lost income, and for pain and suffering and loss of enjoyment of life. If one regards the balance of the settlement as income replacement only, the compensation for the injury and economic losses would be equivalent to just over one and a half years of income of the average Albertan employed full time.

Isolating from the class of fatality claims only those cases where the deceased was employed before the fatality, the dependant claimant received an average settlement of $109,975. This sum is approximately four times the annual salary of the average employed Albertan.

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[19] Claim Survey, fn 1, supra , p 4 and 6.

[20] Claim Survey, fn 1, supra, p 11.

The Board takes the view that there is an imbalance in the compensation provided to injured claimants under the current system. Claimants with minor injuries are overcompensated and claimants with catastrophic injuries are undercompensated. In the case of minor injuries, some claimants receive more than 100% recovery of their wage losses. Moreover, claimants in this class are overcompensated relative to the non-pecuniary general damages recovery of injured claimants in the other classes. For example, a claimant with a minor whiplash injury from which he fully recovers within three months may receive tort recovery of non-pecuniary general damages in an amount of $3000, although he may have lost no or little time from his employment. His pain and suffering may have consisted of discomfort and restriction of his recreational activities. In short, his loss of enjoyment of life may have been diminished only minimally and in any case, only temporarily.

By contrast, a more seriously injured claimant left with a 5% permanent partial disability and permanent pain might receive an award of $20,000-$25,000 for non-pecuniary general damages. He might have been restricted in his employment opportunities as a result of the injury and forced to give up certain of his recreational activities forever.

Further, a claimant with catastrophic injuries, confined to hospital bed for a remaining life span of 50 to 60 years, and unable to ever engage in any work or leisure activities whatsoever, can receive no more than $225,000 (in 1991)[21] for pain and suffering and loss of enjoyment of life.

Finally, a dependant of a deceased breadwinner receives on average a global award of about $110,000 to compensate for damages including loss of dependency on income, loss of dependency on valuable services, including loss of comfort, care and guidance and loss of accumulated wealth.

Assuming economic loss is a proper measure of the severity of the injury, whereas non permanently injured claimants receive about 210% of their wage loss, claimants with permanent injuries receive compensation equal to about 1.5 years of lost wages. Dependants of employed persons fatally injured receive compensation equal to about four years of the deceased's lost wages. In the Board's view, the current system should be modified to correct for the overcompensation of minor injury claims relative to other injury claims. As well, there should be some adjustment to correct for undercompensation of catastrophically injured claimants relative to other injured claimants.

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[21] fn 28, infra.

(c) How timely were the payments made?

The data showed that about 75% of tort claims settled without the commencement of an action. The data also showed that no more than 1% of cases proceeded as far as a pretrial conference.[22] Less than 1% of cases proceeded as far as trial.[23] The data indicated there were delays in final payment of liability claims. The average claim settled within about 18 months of the loss. Some 12% of claims were pending 36 months after the loss.[24]

(d) What were the transaction costs?

The data showed that about 50% of claimants in 1988 retained lawyers for representation in recovery of their claims. That percentage had not increased by 1990. The transaction costs represented about 13% of the total payments of bodily injury claims settlements. These costs included fees paid by insurers to outside lawyers, in-house lawyers, independent adjusters, defence medical and other experts, and other incidental costs,[25] but excluded legal fees paid to claimants' lawyers.

(e) Where were the increases in claims costs from 1988 to 1990?

The data revealed an annual injury claims inflation rate of about 12.9 percent. This rate was more than two times higher than the rate of inflation measured by the Consumer Price Index.[26] This claims inflation rate varied among claims.

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[22] However, in Alberta, trials scheduled for less than three days do not require a pretrial conference.

[23] Claim Survey fn 1, supra, p 16.

[24] Claim Survey fn 1, supra, p 14.

[25] Claim Survey fn 1, supra, p 15.

Claimants with soft tissue injuries only and unrepresented by legal counsel received the lowest non-pecuniary general damages awards. However, the rate of inflation of their claims was about equal to those of similarly injured claimants with legal counsel. Claimants with other than soft tissue injuries and without legal counsel received settlements with the lowest rates of inflation. By contrast, claimants with other than soft tissue injuries and represented by counsel received settlements with the highest inflation rates. When counsel represented claimants, the value of the claim showed an increase of about two to three times the amount received by unrepresented claimants. The Board made two observations from the data. First, the more serious the injury, the greater was the value of the award, irrespective of counsel. Second, the involvement of legal counsel resulted in an increase in the settlement value of the claim.

The analysis of Ontario claims was instructive for purposes of comparison. It suggested several factors to explain the increase in bodily injury costs in Ontario.[27] One factor was the increases in economic loss caused by economic prosperity which resulted in more large claims for past and future loss of income. Another factor was increased accident frequency caused by economic prosperity. A third factor was the statutory discount rate set up by statute since 1980. A fourth factor was health care advances. A fifth factor was the developments in the judicial and litigation processes as they applied to the automobile insurance system. In particular, the decisions of the Supreme Court of Canada in the Trilogy in 1978[28] encouraged courts to separate the various heads of damages. This development permitted a higher calculation of economic loss. Lawyers' inventiveness in proving economic loss by presenting convincing expert evidence had led to increased economic loss damage assessments which had increased total damage awards. When trial damages increased, settlements tended to increase.

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[26] Claim Survey fn 1, supra, p 15.

[27] The Osborne Report, fn 3, supra, p 269-275.

[28] The Trilogy consists of Andrews v. Grand & Toy Alberta Ltd., [1978] 2 S.C.R. 229; Arnold v. Teno, [1978] 2 S.C.R. 287; Thornton v. Prince George School District No. 57 et al, [1978] 2 S.C.R. 267.

Moreover, the defendant's insurer usually paid a portion of the claimants' legal costs as party and party costs. Finally, gross up[29] awards significantly increased claims costs in fatal accident and major injury cases.

The Osborne Report found that the increase in numbers of claimants represented by counsel in Ontario led to a direct increase in claims costs for two reasons. First, costs increased because the involvement of counsel usually had the effect of increasing the value of the claim. Second, costs increased because the insurer also had to pay on average about 10-15% of the claim as party and party costs. In Ontario, the judicial pretrial procedure and the legislation introducing judgment interest also figured in the increased loss costs. The Osborne Report found that transaction costs spent in resolving bodily injury claims in Ontario had remained stable. The only increase may have been due to defence legal costs. It doubted that judicial generosity increased the cost of claims.

Some of the factors operating in the Ontario insurance problem were also operating in Alberta. However, the data suggested that the pressure on bodily injury claims costs occurred in Alberta for specific reasons.[30]

(ii) Accident Benefits Survey Results

(a) What was the nature of the compensation paid?

The data showed that employed claimants with non permanent injuries received an average of $3,096 in no fault accident benefits. They received 74.9% from their own automobile insurers. Claimants' employers paid an average of 22.1%, and the Unemployment Insurance Commission paid about 2.2 percent. Claimants' accident and sickness insurers paid about 0.8% of the settlement.[31]

The data showed that disability benefits and medical costs of the injured claimant consumed the highest percentage of payments.[32] These two classes made up a total of 75.3% of paid accident benefits. Death benefits for the principal sum and for survivors made up the next largest percentages of accident benefit payments. Payments for long term care, rehabilitation and disability payments for a spouse included extremely small percentages of the whole of accident benefits.[33]

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[29] Watkins v. Olafson, [1989] 6. W.W.R. 481 (S.C.C), and see pp 81 and 85, infra.

[30] see p 57 and 58, infra.

[31] Claim Survey, fn 1, supra, p 12.

(b) How were the claimants compensated for economic loss?

The data showed that on average, claimants with non permanent injuries recovered $3,096, or about 39.9% of their wage loss. Accident benefits coverage from the automobile policy paid about $2,319 or about 30% of that loss.

(c) How timely were the payments made?

The data showed that the payments of accident benefits were subject to delays. The greatest delay occurred between the date of the loss and the date the proof of loss was received by the insurer. It is not clear what caused this delay. While 83% of claims were reported within a week of the loss, the average claimant did not submit an application for benefits until over four weeks after the loss. It may be that the claimants do not always understand the procedure for claiming accident benefits.

Once the insurers received the proof of loss from the claimants, about half the claimants received some payment within a week. About 22% of claimants received a benefit payment between one and four weeks following receipt of the application. However, the data showed that over 28% of claimants waited more than four weeks before obtaining the first payment. This shows a second significant delay in the delivery of accident benefits.[34] It is also not clear what causes this delay.

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[32] Claim Survey, fn 1, supra, p 11.

[33] Claim Survey, fn 1, supra, p 11.

[34] Claim Survey, fn 1, supra, p 15.

(III) Comparison of Compensation under Tort and No Fault

The Board concludes there is an imbalance between the compensation provided to claimants who have a tort claim and those who do not. As indicated, claimants with non permanent disability and not at fault for the loss received a total average payment of $15,842. This sum included complete recovery of their wage losses. By contrast, an at fault claimant would receive an average of only $3,096 for compensation of wage losses.

If a claimant suffered a permanent and total disability, he would receive a total average settlement of about $43,878. Of that sum, an average of $19,246 replaced past lost income. A similarly situated at fault claimant would receive an average payment of $29,824 for all claims. In a fatality claim with a tort action, the estate would receive an average payment of $111,443. In a fatality claim without a tort action, the estate would receive an average payment of $7,918.

If the claimant was at fault and received a non permanent injury, his average payment of $3,096 would equal only 39.9% of his wage loss. If he was at fault and had a permanent injury, he would receive an average payment of only $10,605 from his own automobile insurer. The disparity in compensation is shown by comparing the recovery received by claimants with non permanent injuries. The data show that claimants entitled to accident benefits only received less than 40% recovery of their wage losses, while claimants who had recourse to both tort and no fault benefits received full and possibly more than full recovery for their wage losses.

The Board concludes there is a marked disparity between the compensation received by victims who have a tort claim and those who do not. The data show that the no fault benefits provided by the current system are wholly inadequate. Moreover, the funeral and medical benefits have not been adequately upgraded on a regular basis since 1972 and are now seriously out of line with 1990 costs. Finally, the death benefit is outdated.

2. EXAMINATION OF CURRENT PREMIUM AND LOSS COST LEVELS

The Board tracked the development of premium and loss cost levels in Alberta to 1990. Figure 9 helps to explain its findings. Figure 9 depicts average third party liability premiums and loss costs per vehicle insured using undiscounted reserves. It shows that from 1985 through to 1990, the combined bodily injury and property damage costs exceeded premiums by a gradually widening margin. The gap between combined costs and premiums remained significant in 1990. However, the Board did not regard the picture depicted in Figure 9 as the most realistic portrayal of the relationship between loss costs and premiums.

First, the picture in Figure 9 does not consider the time value of money. To include this feature in the equation, reserves must be discounted.[35] Figure 17 shows the loss cost and premium picture in Figure 9 with the costs lines adjusted to display discounted reserves. In Figure 17, the costs lines are lowered and show the average premiums in near balance with costs from 1988 to 1990.

Second, the picture must take insurers' operating expenses, such as premium tax and licence fees, into account. IBC data suggest that the operating expense for Alberta insurers has been about 26-27% of earned premiums. The Board used that percentage to show the premium available to pay losses after deduction of operating expenses. With operating expenses and discounted reserves considered, Figure 17A shows a very wide gap between the premium and the loss costs lines. Moreover, the gap has been widening continuously since 1986.

It is useful to look at concrete numbers to appreciate the changes in premium levels between 1987 and 1990. In 1987, the average premium for third party liability coverage equalled $180.24 in nominal dollars. That rate increased only to $184.30 in 1988. However, it increased to $199.70 in 1989 and then to $228.25 in nominal dollars in 1990. After deduction of 1990 operating expenses, the annual premium equalled $168.68. This calculation, referred to as the pure premium, represents the amount allocated for payment of claims.

Figure 9 shows that average bodily injury loss costs increased by 23 per cent from 1989 to 1990. However, there was little change in property damage loss costs. The average loss cost per vehicle

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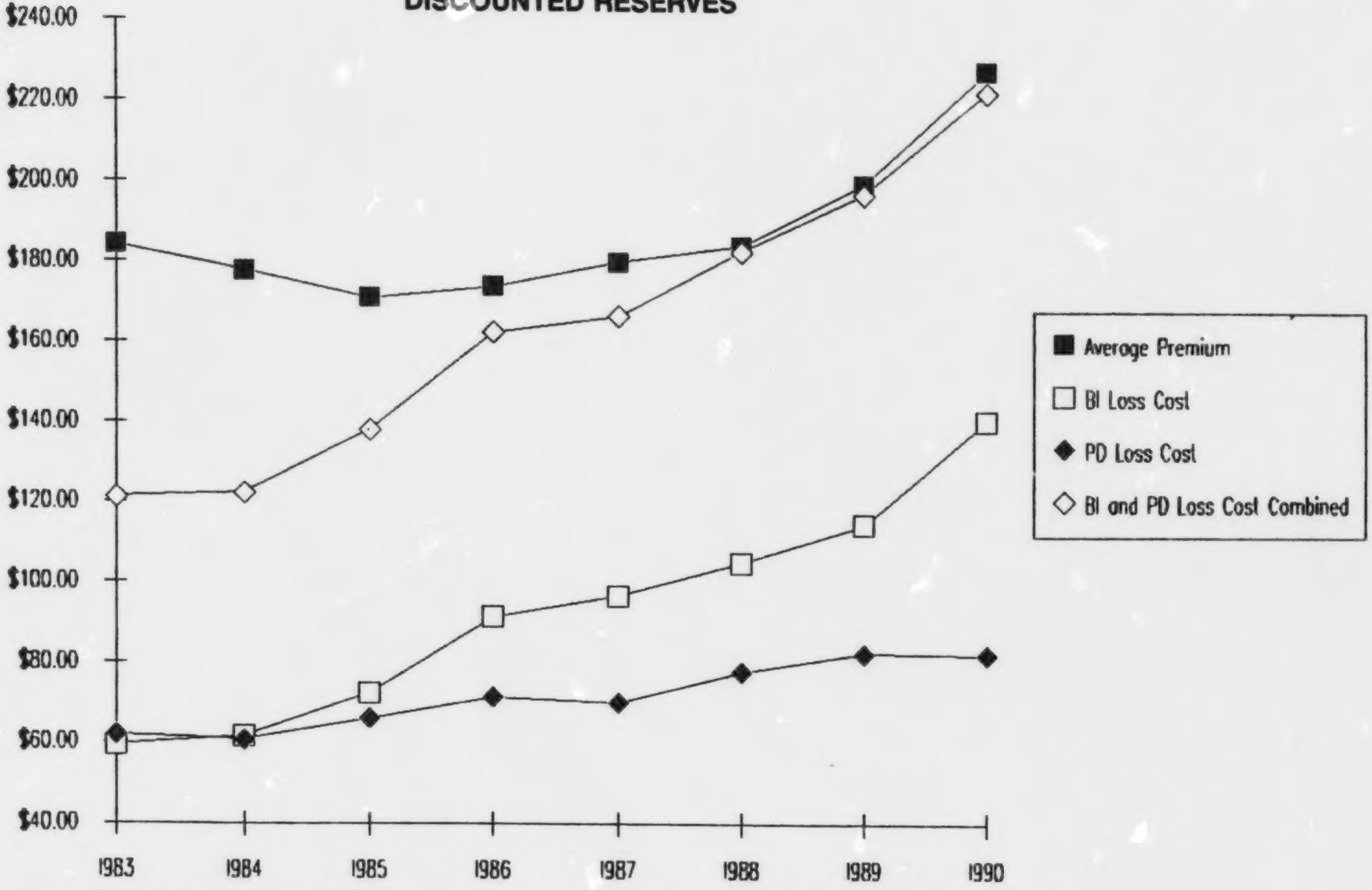
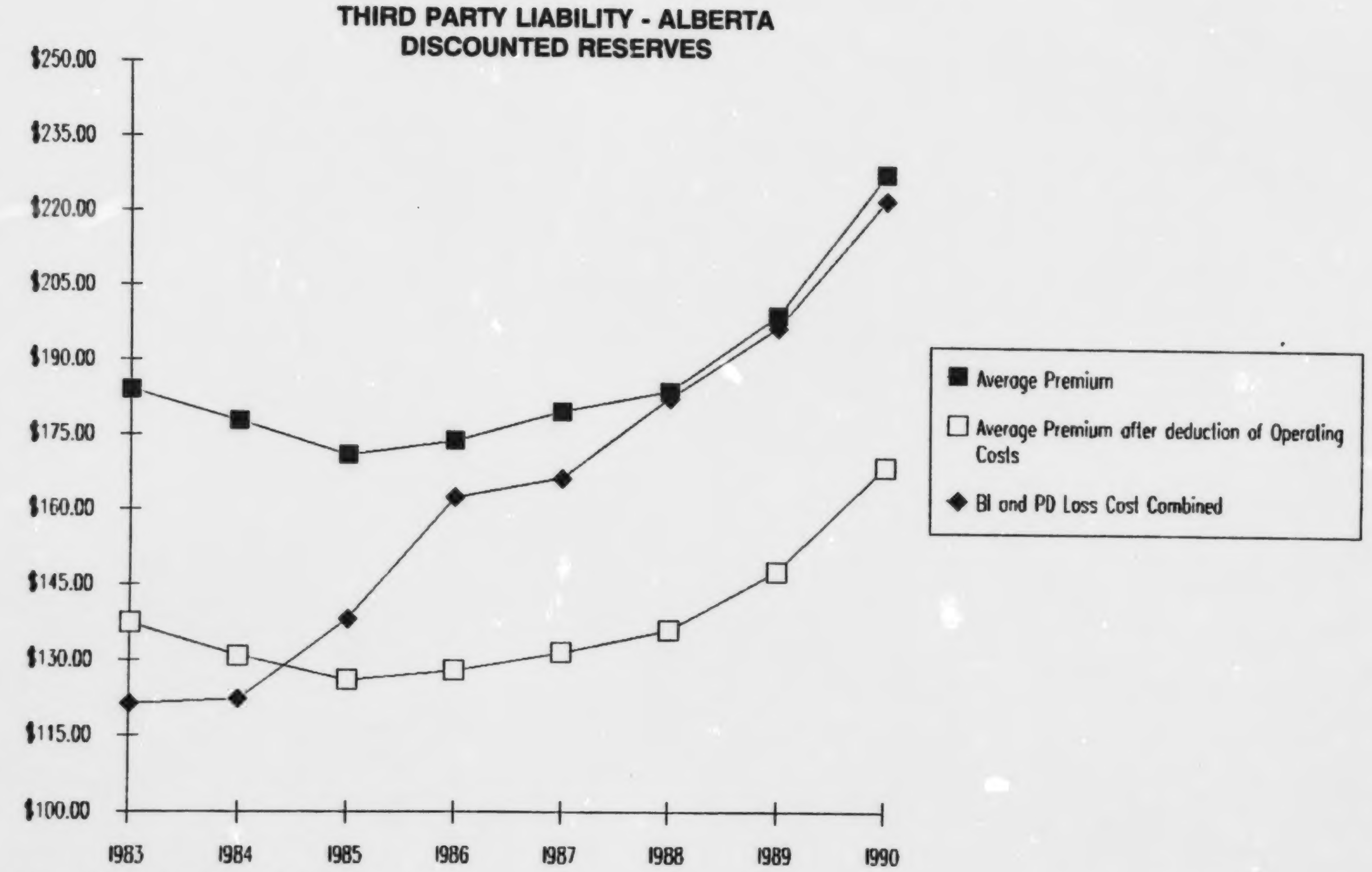
[35] A succinct explanation of the justification for discounting reserves when assessing loss costs in the auto insurance industry is found in The Osborne Report, fn 3, supra at pp 281-282.

THIRD PARTY LIABILITY - ALBERTA
DISCOUNTED RESERVES



Source: IBC Accident Year Statistical Data

Figure 17



THIRD PARTY LIABILITY - ALBERTA
DISCOUNTED RESERVES

Source: IBC Accident Year Statistical Data

Figure 17A

insured for third party liability coverage in 1990 was $277.42. The average loss cost per vehicle insured in 1990, after considering discounted reserves, equals $223.02. Thus the average loss cost per vehicle in 1990 exceeded the average pure premium in 1990 by $54.34. Notwithstanding the large percentage increases to premiums between 1988 and 1990, the premium levels still fell seriously below loss costs.

As shown by the data, the factor most responsible for the increase in loss costs was the rise in bodily injury costs. The increase at an average rate of 12.9% per year from 1988 to 1990 shown by the claims survey is startling. The rate of increase of bodily injury costs has had a significant bearing on the pricing problem from 1985 to the present.

The Board found that the Government has not maintained separate statistics on the cost of litigation of insurance claims through the civil court system. However, from the claims survey data the Board concludes that resort to the court system had not significantly delayed or added to the cost of the resolution of most tort claims.

The Board concluded that the increases in loss costs between 1988 and 1990 in Alberta did not occur for all the reasons given for the problem in Ontario. Alberta was in a stage of slow growth in 1988-1990. Thus, the Board concluded that the economic conditions were not a major factor in the increase in bodily injury costs in this period. Judgment interest legislation increased claims costs for economic losses, by prescribing rates which have nearly matched the corresponding market interest rates. However, the Board decided the judgment interest legislation had probably only a minor effect on the increase in bodily injury loss costs in this period. Because of the small percentage of cases proceeding through the court system, the Board doubted that the pretrial process or judicial generosity affected the cost of claims between 1988 and 1990.

On the other hand, the Board agreed that from 1978 to the present, the judiciary and legal profession contributed to the increase in costs of serious bodily injury claims. The analysis in the Osborne Report[36] explains how the decision in the Trilogy of cases allowed for expansion of amounts for damage awards. It showed how the legal profession developed better methods of proof of losses flowing from serious injury claims. Thus the claims costs reported for permanently disabling injuries during the late 1980s in Alberta increased probably as a result of those developments. The Alberta data also show that the involvement of counsel had the effect of increasing the value of the claim. The Board expected that the insurers' requirement in some instances to pay party and party costs would further increase that value. Although the data were not conclusive, the Board considered it fair to accept that rising health care costs also contributed to increases in claims costs. Ordinary inflation would also add to the cost of claims.

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[36] The Osborne Report, fn 3, supra at p 270 et seq.

It will be recalled that in the period between 1972 to 1989, the inflationary effect on the cost of insurance was less than the effect on the cost of living generally. In the period between 1988 and 1990, however, the inflationary effect on the cost of claims had exceeded the rate of inflation on other consumer goods by a significant rate. Since all bodily injury costs increased at an average rate of 12.9% per year, and since the wages portion of those costs generally had not increased by more than 5 to 6% per year, the Board concludes that most of the inflationary pressure resulted from the costs of non-pecuniary general damage claims. It is noted that the inflation rate for non pecuniary general damages would have been higher than the 12.9% rate for all bodily injury claims costs. The transaction costs in Alberta likely increased at about the same high rate of 12.9 percent.

The data have also produced findings relevant to the compensation aspect of the current system. In particular, it is significant that about two thirds of the claimants compensated in Alberta were not at fault for their injuries. Claimants not at fault with tort rights received full compensation for their economic losses. On the other hand, claimants who were at fault for their injuries were not compensated for the full amount of their economic losses. Moreover, the data revealed significant delays in the delivery of benefits and payment of claims.

C. CONCLUSIONS

The Board formed the following conclusions:

1. Historically, there has not been stability of automobile insurance premiums in Alberta. However, in constant dollars, the cost of automobile insurance declined steadily

from 1977-1989. Moreover, the amounts and types of automobile insurance coverage increased over the period. Alberta motorists in 1989 received a more extensive insurance product for their dollar than was the case in 1972.

2. Loss costs have increased dramatically since 1985. The main reason for the increase in claims costs was the increase in bodily injury loss costs. Most of those costs resulted from non-pecuniary general damages claims.
3. Insurers could have justified premium increases since 1985. Until 1989, they had not sought necessary increases due to intense competition in the market place. As a result, Alberta motorists have paid less for insurance than it actually cost from 1985 to 1990.
4. The Board granted increases in third party liability premiums in 1989 and 1990. The increases were justified because loss costs continually exceeded premium levels after operating costs were accounted for.
5. The recent increases have not yet brought premiums into balance with the current expected costs. The Board expects that, absent some reversal of trends, loss costs will continue to increase because of continuing increases in frequency and severity of injury claims.
6. Claimants with minor injuries are overcompensated in the tort side of the system relative to all other traffic accident claimants. Claimants with catastrophic injuries are undercompensated in the tort side of the system relative to all other traffic accident claimants.
7. Wage indemnity, death benefits, funeral benefits and rehabilitation benefits provided by the no fault feature of the current system are inadequate. Thus, at fault claimants are inadequately compensated for their economic losses relative to tort claimants.
8. There are certain structural deficiencies in the delivery of benefits in the current system. All payments required under the current system are subject to delays.

IV. WHETHER PREMIUM STABILITY IS LIKELY IN THE FUTURE

The claims surveys showed that current claims cost increases are due to inflation and increases in frequency and severity of bodily injuries. The Board expects that increases in frequency and severity of bodily injuries will continue. The non-pecuniary general damage awards for pain and suffering will likely continue to increase at a significant rate. As well, costs of medical care, economic losses, out-of-pocket expenses for consumer goods, and repair costs will continue to increase in the future due to ordinary inflation. Thus, the Board expects loss costs to continue to increase in the short and long terms.

The premium increases recently seen in 1988-1990 have been required for two reasons. The first is the need to redress accumulated premium deficiencies. Premiums will continue to increase in the short term to compensate for those accumulated deficiencies. The second is the claims cost increases. While the premium deficiency problem would likely correct itself in the short term, there is no specific feature operating in the current system to control increases in claims costs. As a result, the Board foresees that premiums will continue to increase in the long term unless bodily injury costs are curtailed in some fashion.

The Board concludes that the pricing problem in automobile insurance, if not resolved, will develop into a crisis. The level of premiums is not yet in balance with the costs required to pay insured losses. Moreover, premium increases usually follow loss cost increases. If premiums can rise to the level of loss costs, then the system will regain its balance. On economic principles, the current system can operate properly. The Board concludes that on an economic basis, as long as premiums relate proportionately to the expected costs of compensation, there will be relative stability in pricing of automobile insurance. It follows from an economic analysis that the pricing problem does not warrant change to the existing system.

On other than economic principles, does it follow from the fact that premiums will increase that there is or will be premium instability? The Board considers this to be a matter of opinion. Dramatic premium increases have occurred before in Alberta automobile insurance history. In those periods the system did not collapse due to lack of consumer confidence. The present problem is that severity and frequency of traffic accidents show a tendency to continue to increase. Moreover, severity and frequency are not varying inversely as they often have done in the past. The Board considers that the solution to the issue of premium increases depends on the view Albertans hold about the type of system they want and are able and willing to pay for. How would Albertans decide to deal with the problem of expected increases in the costs of claims? There is no uniform viewpoint among participants in the system about whether it is the costs or the premium levels which should be curtailed to preserve the balance to the system.

Some hold the view expressed in the Osborne Report that while "automobile insurance is compulsory, driving is not."[37] Those of this view would suggest that premiums should rise to meet the level of expected loss costs. They might claim there should be no intervention from outside the system. Instead, the participants should respond. They might urge the participants to bring about adjustments in the operation of the system that will reduce increases to the cost of insurance. Insurers can try to refine their underwriting practices and improve risk rating. The participants can try to induce motorists to avoid risky driving behaviour. It could be argued that the mutual desire to maintain the cost of automobile insurance at a reasonable level will cause each group to respond in its own best interest. Even if the cost of insurance does rise, proponents of this view would say that such effect will dissuade high risk drivers from driving. The result of reduced driving by those motorists will diminish claims costs. When claims costs decrease, the cost of insurance will decrease.

It follows from this view that the problem of premium stability does not require redress by government intervention in the automobile insurance system. If the Government accepts this view, the Board concludes that the Government should expect premium increases. The Board would recommend that the Government react by adopting a policy to educate and prepare the public for premium increases by encouraging understanding of the principles on which the system operates. Its policy could encourage voluntary conduct from, and working in partnership with the participants to reduce claims costs. For example, it could consider policies to reduce the occurrence of traffic accidents and to enhance the administrative structure of its licensing and sanctions of motorists to improve the operation of the automobile insurance system.

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[37] The Osborne Report, fn 3, supra at p 513.

An opposing viewpoint would flow from the belief that the Government should ensure that the automobile insurance product remains affordable and available. This view is based on the fact that third party liability insurance is mandatory for Albertans who wish to operate motor vehicles. Proponents of this view would argue that in the Alberta context, driving is virtually compulsory for many citizens. If increasing claims costs cause increases in premiums, then insurance will gradually become less available and less affordable to many drivers. As the Government requires motorists to have insurance at minimum statutory limits of $200,000, then this viewpoint says it has a corresponding obligation to limit the cost of automobile insurance to levels that are affordable to most Alberta drivers. It might be corollary of this viewpoint that the Government has a duty to maintain the consumers' confidence in the automobile insurance system. Those of this viewpoint might say that the frequent premium increases raise questions in the consumer's mind about whether insurers calculate premiums fairly, or provide adequate and timely benefits when required. These questions might create a potential crisis of consumer confidence in the automobile insurance system. This potential crisis stems from the consumer's experience of premium increases and experience with receipt of benefits when losses do occur. Some might argue that the Government has the responsibility to prevent or solve such a crisis.

The Board considers that the problem for consumers may be not that premiums are unstable, but that they are not static. There is no evidence to show that Alberta motorists have paid too high a price for insurance in the recent past. If there are concerns in the automobile insurance consumer's mind at present, it may be because those with losses have not experienced satisfaction in the receipt of benefits. That dissatisfaction may be measured against the premium they currently pay. On the other hand, the Board agrees that the cost of automobile insurance will continue to mount in the future, if effective cost-saving measures are not undertaken. As the price of automobile insurance increases, more and more motorists will have difficulty affording automobile insurance. That dissatisfaction will have to be addressed either by the participants in the system, or the Government, or both.

The Board concludes that the two viewpoints require political and social analysis. Neither viewpoint is obviously correct or incorrect. Indeed, there may be other viewpoints or variations of viewpoints to consider. The determination of which viewpoint to adopt in resolving the pricing issue is beyond the scope of the Board's study. It has proceeded on the assumption that the Government may accept either view.

The Board has thus examined two methods to flatten or reduce future premium costs. The first method is a set of effective traffic safety measures to reduce severity and frequency of accident costs. In the Board's view, these measures would likely operate to help contain premium increases. The Board recommends that the Government apply this method if it accepts the first viewpoint for resolving the automobile insurance pricing issue.

If the Government accepts the second viewpoint, then it should take an interventionist approach. The Government should first adopt the aforesaid measures to reduce the costs of accident severity and frequency. Second, it should reduce the amounts paid to traffic victims.

The two cost saving methods are considered below in detail.

V. METHODS TO CONTROL PREMIUM INCREASES

A. REDUCTION OF ACCIDENT FREQUENCY AND SEVERITY

> " ...the best available cost control device is accident prevention. If the frequency and severity of accidents can be reduced, not only will premiums fall, but more importantly, lives will be saved and the tragedy of disability will be lessened."
>
> per Osborne, J.[38]

The Alberta data showed that the dramatic increase in claims costs in recent years was due mainly to the increase in compensation for pain and suffering, and loss of enjoyment of life of persons injured in road accidents.

The traffic statistics are chilling. In 1989, 487 Albertans were killed in traffic accidents and 19,753 were injured.[39] Figure 18, which displays Alberta accident statistics, shows serious over-representation

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[38] now Osborne, J.A., of the Ontario Court of Appeal, The Osborne Report fn 3, supra at p 739.

[39] Trebilcock and Chapman, fn 2, supra, ch 3, p 55.

AGE AND SEX OF DRIVERS INVOLVED IN CASUALTY COLLISIONS, Alberta 1989
COLLISION RATE PER 1000 LICENSED DRIVERS

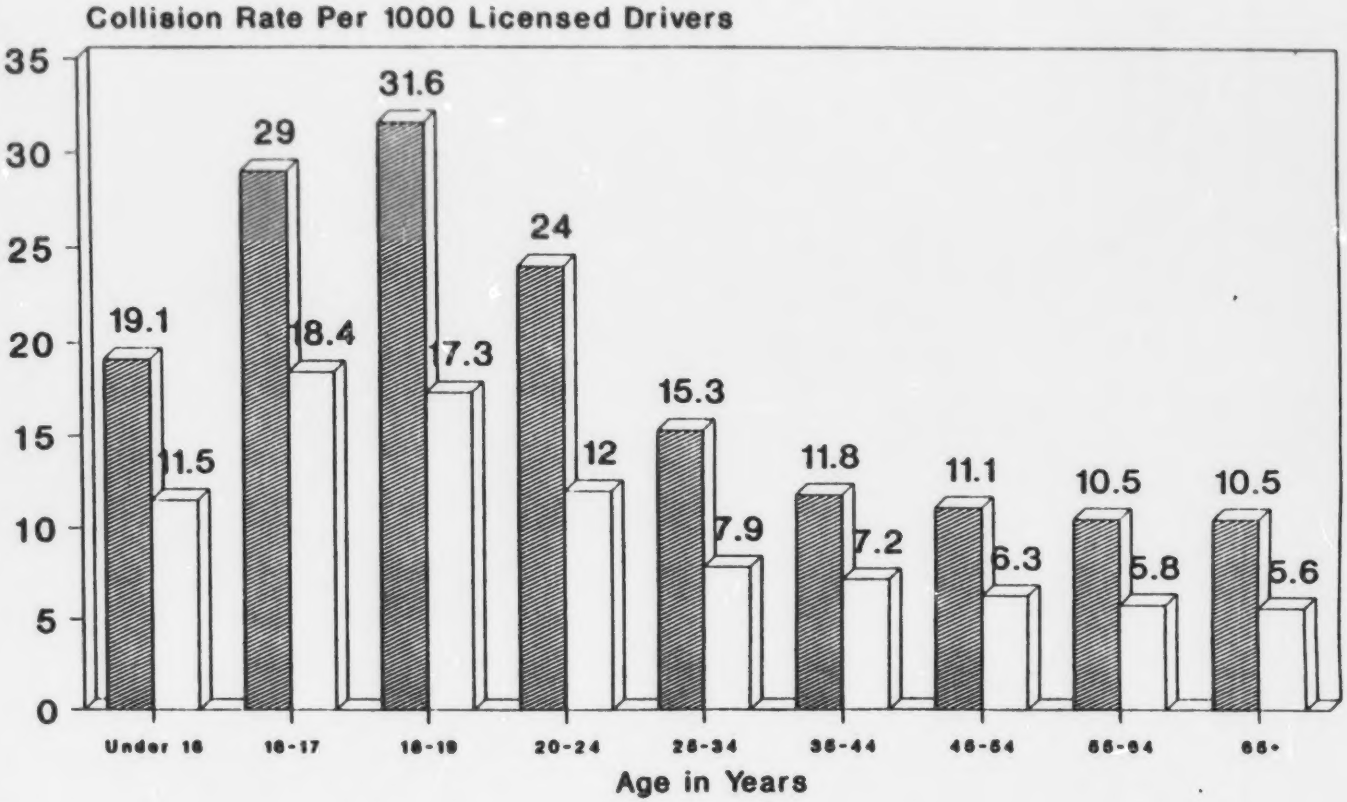

Figure 18

of males aged 16 to 24.

The national scene is a striking enlargement of the tragic picture in Alberta. Professors Trebilcock and Chapman have graphically illustrated the costs of traffic accidents in Canada. They report that more Canadians died in traffic accidents between 1976-1986, than were fatally wounded in World War II (42,042). The Osborne Report noted that in Canada, motor vehicle accidents are the leading cause of death for males between the ages of 15 and 24. Forty percent of males who die in this age group die from motor vehicle accident injuries.[40]

Alberta Traffic Collisions Statistics were provided by the Motor Transport Services of the Alberta Department of Transportation and Utilities and compiled from police accident reports. Professors Trebilcock and Chapman noted that the pattern of fatal and non fatal injury collisions has remained stable in the period between 1985-1989. However, in 1989, Alberta had the second highest provincial fatality rate in Canada.[41] Driver error or misjudgment was involved in 53.3% of casualty collisions. The most frequently identified driver actions contributing to casualty collisions were running off the road, failing to observe traffic control devices, and travelling at unsafe speeds. The most prominent factors in fatal collisions were running off the road, unsafe speeds, and travelling left of centre. Intersection violations which figured prominently in total casualty collisions included failure to observe traffic control devices, failure to yield the right of way and left turn across the path of an oncoming vehicle. A high percentage of fatal collisions occurred in rural areas. Drinking drivers were involved in nearly 25% of fatal collisions and the percentage remained consistent in the period between 1985 and 1989. In alcohol-involved casualty collisions in 1989, there were five and a half times as many male drivers as female drivers. The majority were male drivers under the age of 30. Males between the ages of 18 to 21 years were more likely to have consumed alcohol before a casualty collision than any other age group.

Although the numbers of fatal accidents have not increased in Canada or Alberta, accident frequency and severity of bodily injury liability claims in Alberta have dramatically increased. Motor vehicle accidents are proving to be more and more costly to Albertans both in social and in economic terms. The data from the claims survey show that catastrophic injury cases represented only 1.7% of the claims in the sample. However, this class of injury consumed nearly 40% of the total loss costs from the sample. Of the 10 catastrophic injury claims contained in the survey, 9 of the claimants were male, 6 of those were between the ages of 17 and 24, and of the five cases involving alcohol impairment, three involved young males. It is also noted that 7 of the 10 claims occurred in rural locations.[42] The data confirm the facts from the traffic statistics that young male drivers are seriously overrepresented in serious injury accidents. They further show that factors of alcohol and rural locations figure prominently in the most serious injury accidents in Alberta.

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[40] The Osborne Report, fn 3, supra quoting Statistics Canada at p. 740.

[41] Trebilcock and Chapman, fn 2, supra, ch 3 p 96.

In the view of the Board, the accident trends will continue unless the Government takes appropriate accident prevention and traffic safety measures to reduce frequency and severity of motor vehicle accidents.

Three questions arise. Who should be responsible for directing and coordinating traffic safety and accident prevention measures? What measures are most likely to be effective? In favour of which drivers should the measures apply?

1. INITIATION OF TRAFFIC SAFETY POLICY

> " What should not be forgotten is that advances in traffic safety do not have to be revolutionary in the statistical sense to be legitimately viewed as worthwhile."
>
> per Osborne, J.[43]

Who should be responsible for directing and coordinating traffic safety and accident prevention measures?

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[42] Trebilcock and Chapman, fn 2, supra, p 108.

[43] The Osborne Report, fn 3, supra at p 768.

Traffic safety and accident prevention measures are the responsibility of all persons who use roads and vehicles in the province. It is in the interest of motorists, the insurance industry, and the Government to share this responsibility. It is especially important for the Government to accept some responsibility for this task. One reason is that the law of the province requires all motorists to have compulsory third party liability automobile insurance. Another reason is that the Government has the resources and the means to unify these various groups to coordinate a response to the problem. All interested and affected groups are subject to limits of resources and funding. Given these circumstances, it is critical that the Government select the measures most likely to be effective for most drivers.

At present, the Government has not delegated the responsibility to coordinate traffic safety measures for motor vehicle accident prevention to any one ministry. The public needs a coordinated effort from all ministries which have even a tenuous connection with the subject of road accidents. A coordinated approach to traffic safety would probably involve the Ministries of Transportation, Health, Education, Treasury, the Solicitor and Attorney Generals, and the Minister of Consumer and Corporate Affairs. These various ministries should try to set a unified policy of innovative traffic safety measures for accident prevention in the province. They must work with such funding and resources as may be available.

The Government must initiate measures. It might seek cooperation in turn from the insurance and the automobile industries, educational and health institutions, parents, employers, commercial servers of alcohol, the media, and of course, from all motorists.

2. ELEMENTS OF TRAFFIC SAFETY POLICY

What measures will reduce accidents? The answer unfortunately is not clear. Many experts have undertaken extensive and expensive research globally to determine how to reduce traffic accidents. However, such research has not produced a consensus among experts about what measures are actually effective.[44]

Public policy historically has tried to change driver behaviour by devoting resources to police surveillance and prosecution. More recent theory suggests that reduction of accidents will more likely occur by focusing on the effects of the vehicle and crash environment. On the other hand, critics argue that drivers themselves nullify the expected benefits of vehicle safety design and highway improvements. They will take more driving risks to attain the previous trade off between the chance of having an accident and saving time on the road.

In recent years, public policy has relied on criminal sanctions to reduce the frequency of impaired driving. Some policies have tried to use licensing mechanisms to change the activity and care levels of high risk drivers.

The following analysis considers the policies supported by cogent evidence as being effective in accident prevention.

3. ANALYSIS

a. Effect of Sanctions

(i) Seat Belts

(a) Reduction of Accident Costs

The evidence is clear that seatbelt use reduces accident severity by saving lives and reducing injuries. Seatbelt use prevents fatal accidents at speeds of up to 60 m.p.h.. Estimates find that seatbelts reduce the rates of fatalities by 50-60% and serious injuries by ranges of 20-40 percent.[45] Moreover, there is no clear evidence to show that risk compensation, that is, driving less carefully, increases with seatbelt use.[46] The reductions can occur, however, only if vehicle occupants use seatbelts provided and use them properly. Unfortunately, motorists are inconsistent in the use and proper use of seatbelts.

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[44] Trebilcock and Chapman, fn 2, supra, ch 3 p 56.

[45] Trebilcock and Chapman, fn 2, supra, ch 3 p 61-62.

[46] Trebilcock and Chapman, fn 2, supra, ch 3 p 62-63.

(b) Means of Increasing Compliance

Some studies show that two groups, youthful drivers and those who engage in risky driving behaviour, are less likely to use seatbelts than drivers who are older or who demonstrate more prudent driving behaviour.

Data show that the existence of a mandatory seatbelt use law increases the use of seatbelts. In Alberta, the use rate rose from 27.2% before seatbelt legislation to 82.5% in 1988. Data also show that levels of enforcement and penalties for non compliance significantly influence use rates.[47] The compliance level is lower in jurisdictions where police can enforce the seatbelt law only during the investigation of the violation of another law. Conversely, the compliance level is higher where the law permits primary enforcement. The Board was informed that the use rate in Michigan declined significantly over time following the introduction of the mandatory seatbelt legislation. It was suggested that drivers gradually realized there was only secondary police enforcement of the seatbelt use law and compliance declined.

The other method of increasing seatbelt use is the implementation of automatic seatbelts in all newly manufactured vehicles. This safety device would end the problem of noncompliance.

The Board considers that the maintenance and increase in the level of seatbelt use would be an effective public policy. The Board concludes that the Government should encourage primary enforcement of the seatbelt law to sustain a high use rate among drivers. It should also use its resources to urge the federal government to make mandatory the installation of automatic restraint systems, including airbags, in new vehicles.

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[47] Trebilcock and Chapman, fn 2, supra, ch 3 p 60.

(ii) Control of Speed and Reduction of Driver Error and Misjudgment

(a) Reduction of Accident Costs

Most people accept the theory that increased speed increases both accident severity and frequency.[48] The basis for the theory is that increased speed increases the force of impact and in turn the likelihood of more serious injury. Moreover, increased speed decreases a driver's response time, and in turn increases the frequency of accidents.

Increases in speed may also increase the variation in travel speed in relation to surrounding traffic. This variation increases the incidents of vehicles overtaking vehicles, which in turn increases the risk of collision for both the overtaking and the overtaken vehicle. However, low highway speed can cause drivers to become inattentive. Because it extends driving time, it also causes drivers to become fatigued, and may also increase variations in speed.

The data do not always agree that speeding by itself is a significant cause of injury accidents.[49] They do support the view that travelling above or below the median speed of the surrounding traffic increases the risk of collision. Thus the aim in the area of controlling speed should be to close the speed variation gap.[50]

The Alberta traffic statistics show a correlation between accidents and speed violations. The Board concludes that control of excessive speed and significant speed variations is likely to reduce accident costs in Alberta.

The Alberta traffic statistics further show a correlation between certain driver errors or misjudgments and accidents.[51]

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[48] The Osborne Report fn 3, supra, page 758 et seq.

[49] Trebilcock and Chapman, fn 2, supra, ch 3 p 66.

[50] Trebilcock and Chapman, fn 2, supra, ch 3 p 68.

[51] Trebilcock and Chapman, fn 2, supra, Table 4.2, ch 3, p.97.

(b) Means of Increasing Compliance

As said, public policy historically has devoted considerable resources to police surveillance and prosecution. The enforcement of speed limits is a clear example of the devotion of numerous resources to change driver behaviour with mixed results. *Thus it is not clear that reducing legal limits* of speed reduces accidents. It is also not clear that police surveillance to detect minor deviations from the speed limits effectively reduces frequency or severity of accidents.

The data do show that the accident rate increases with increased deviations from mean traffic speeds. Thus the Government should not lower speed limits to such a level as to encourage massive violations and higher variances in speed. Enforcement efforts and severe sanctions should especially target those drivers who commit large deviations from average traffic speeds.

The Board concludes that the Government should double the penalties for excessive speed and significant speed variations. The Government should increase penalties for the traffic violations most frequently correlated with traffic accidents. The Government should reassess the use of police resources in the urban and rural areas of the province. The Government should increase police enforcement of the violation of these speed and driver error offences particularly in rural areas.

(iii) Driving Impaired by Alcohol

(a) Reduction of Accident Costs

Drunk driving remains the most important identifiable fact in fatal traffic accidents.[52] In 1985, 41.3% of fatally injured Alberta automobile drivers tested for alcohol had blood alcohol concentrations over 80mg/100ml. Reductions in alcohol-related fatal accidents occurred in Canada in 1969 after the introduction of widely publicized criminal sanctions. However, the number of such accidents later returned to, and then exceeded, former levels.[53] The short term effect of the reduction occurred because, over time, drivers correctly perceived a low likelihood of apprehension and severity of punishment for impaired driving.

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[52] Trebilcock and Chapman, fn 2, supra, ch 3 p 69.

[53] Trebilcock and Chapman, fn 2, supra, ch 3 p 70.

Public agencies apply numerous resources to the increase in severity and enforcement of criminal sanctions against impaired driving. However, studies suggest that the current use of impaired driving blitzes such as Check Stop do not dramatically reduce frequency of impaired driving. Significant increases in arrest rates do not necessarily reduce alcohol-related accidents.[54] It is clear from the Alberta traffic statistics that alcohol is a significant factor in accidents. The problem requires more measures to reduce or end the costs of alcohol related collisions.

(b) Means of Increasing Compliance

The studies show that the most effective method of reduction of impaired driving by use of sanctions is a comprehensive approach of effective detection programs, significant license suspensions, publicity, and education. Such approach is more effective than mandatory jail terms, long term driver training or rehabilitation programs. Extensive use of random breath testing combined with extensive publicity about the certainty and severity of punishment is effective. Evaluations of such a program in Australia showed that in the first three years, it reduced fatal accidents involving alcohol by an average of 21 percent. It reduced fatal accidents between 11 p.m. and 3 a.m., a high risk period for impaired driving, by over 40 per cent.[55] Thus the Board recommends that the Government enhance the Check Stop program. The Government should empower police to administer informal breath tests to all drivers proceeding through a Check Stop. Moreover, it should run the program year round. The program should direct special attention to the period between 11 p.m. and 3 a.m. The Government should effectively publicize the program and the results for violators. Other demonstrably effective means of reducing alcohol related accidents include the following:

- Legislation to increase the minimum drinking age;

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[54] Trebilcock and Chapman, fn 2, supra, ch 3 p 70.

[55] Trebilcock and Chapman, fn 2, supra, ch 3 p 72.

- The increased application of cooperative strategies among persons who serve alcohol, employers, and parents to prevent driving and drinking;
- Installation of certain roadway design features such as raised rumble strips of median lines and signage to reduce wrong way crashes;
- Support for legislation to mandate installation of breath tests or performance interlocks to prevent driving or to warn other motorists of a potentially impaired driver.

b. Effect of Licensing

(I) Reduction of Accident Costs

The Board emphasizes that the over-representation of Alberta drivers under the age of 24 in accident statistics warrants special attention. The Government should assess all measures which may positively reduce frequency and severity of bodily injuries. The social cost is significant in the loss of the opportunity to live full lives. Moreover, severely injured young drivers and passengers incur the highest levels of claims costs. These victims require compensation for pain and suffering, loss of past and future income, cost of future care and the like. A small number of serious injury claims in this group can generate the need for premium increases in the years following.

Unfortunately, there is no clear reason for the over-representation of young drivers in accidents. Part of the explanation may be inexperience. Another part may be behavioral and environmental factors such as aggression, immaturity and peer pressure. There is also a high correlation between alcohol involvement and traffic accidents involving young drivers, particularly male drivers and particularly between the ages of 18-21 years.

The Government should also encourage all drivers, especially those who are youthful, to support measures to reduce accidents due to driver error or misjudgment.

(II) Means of Increasing Compliance

Many licensing policies apply to youthful, especially teenage, drivers. Licensing is a more effective means to monitor and to elevate the standard of driving conduct than criminal or civil sanctions. Licensing can control the entry of drivers, survey and record driver misconduct, and control and sanction driving activity. It can also control entry and enforce exit as a result of post-licensing driving behaviour. It can educate or complement education to improve driving behaviour. Education can be one of the conditions to attain or maintain a licence.

(a) Minimum Age of Drivers

The data show that raising the minimum age for a driver's licence can significantly reduce accidents in the prohibited age group.

(b) Graduated Licensing Programs

There are considerable safety gains attainable through graduated licensing programs carrying strategic restrictions on driving of all new drivers, not merely those with a history of convictions, including the following:

- nighttime and weekend curfews
- requirements that adult drivers accompany youthful drivers
- restrictions on youthful drivers transporting teenagers
- lower levels of permitted legal blood alcohol concentrations
- fewer moving violations or demerit points to trigger licence suspensions for youthful drivers.

(c) High School Driver Education

The data show that increases in driver education in high schools increase licensing of youthful drivers. Surprisingly, it also shows increases in accidents in this age group. These programs expose more young people to driving risks without providing the skills to reduce the risk of accidents presented by their increased exposure. Although there are no data on the point, the Board favours the introduction of effective driver safety education programs at elementary school levels to shape the attitude of future motorists.

(d) Minimum Legal Drinking Age

The data show that increases in the minimum legal drinking age reduce traffic accidents among the affected groups. The safety gains attained by this measure are not fully offset at later ages.[56]

(e) Post-Licensing Control

The most effective traffic safety measure is license suspension. While the impact of this measure on reducing accident rates may be modest, its use reduces driving activity. The mere threat of licence suspension reduces risky driving behaviour. It also increases the care in driving by suspended drivers. The data show that it is more effective in reducing accidents than more costly educational or rehabilitative programs. Having regard to the need to reduce traffic violations including excessive speeds, and driving while impaired by alcohol, the Board recommends more frequent use of short-term license suspensions. The Board further recommends enforcement of appropriate sanctions for the offence of driving while suspended.

c. Effect of Rewards

Some of the data suggest that incentives increase rates of seatbelt usage and reduce accident rates. For example, seatbelt usage rates increased significantly when drivers who signed pledge cards to wear seatbelts received an opportunity to win a sweepstake prize. Psychological theory shows that small incentives over time do induce desired behavioral changes. It has been suggested to link safe driving with provincial lotteries by giving violation free or accident free drivers one or more lottery tickets upon license renewal. Because of the importance of reducing severity and frequency of traffic accidents, the Board recommends investigation of experiments and innovation with reward-oriented techniques in traffic safety. It recommends that every automobile policy and renewal certificate show in dollar terms the rate rewards and disincentives applied to the applicant for good or risky driving. The Government should require insurers to ensure compliance with this requirement.

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[56] Trebilcock and Chapman, fn 2, supra, ch 3 p 76-77.

d. Effect of Motor Vehicle Safety Design

The aim of safety design standards in motor vehicles is to avoid or insulate an occupant from injury resulting from the impact of a crash. The U.S. National Highway and Traffic Safety Administration will likely require the installation of automatic restraint systems, including automatic airbags and automatic seatbelts, for all front seat occupants of vehicles produced after 1993. The Board accepts that such restraints will be effective in reducing severity of injuries in traffic accidents.

e. Effect of Highway Safety Design

There are questions whether safety features of highway design reduce frequency of accidents by compensating for driver error. Data show that more than fifty highway design and maintenance elements have some type of relationship to the issue of safety. These elements include road surface, road width, gradients, radius of curves, number of lanes, median strips, width of shoulder, signage, and the like. However, it is not a simple task to identify the locations on roadways where accidents frequently occur. Similarly, it is not easy to show that accidents occur frequently in a certain location by reason of any highway design flaw or risk attendant at that location. On the other hand, highway improvements are costly. Thus, the Government must decide how to apply limited resources to attain the safety goal. The difficulty in rating the safety gained from any one highway improvement complicates the task.

One aspect of the evaluation problem is that a selected improvement may result in countervailing effects in other areas of the highway system. For example, accident rates may decrease in the location of the safety design improvement but increase in another location. Drivers sometimes increase the levels of risk in their driving behaviour in response to highway safety improvements. If this is so, then their conduct lessens the benefits expected of the improvement carried out. The offsetting effect of drivers' responses further complicates the task of choosing among highway safety improvement options. How many such options should the Government choose? Which will be the most useful? At which locations will the options produce the highest safety gains? How will the Government determine and test the offsetting risks?

Because of limited resources, the Government must carefully arrange their priorities in this area. The cost benefit analysis could be daunting. On the other hand, vehicle safety regulations and highway safety improvements relate to the dramatic decline in fatality rates in many industrialized countries. The Board thus recommends that the Government continue its efforts to improve highway design and condition in the province, especially in the rural areas. The Board believes that such efforts will help to reduce accident frequency and severity. The task requires a system-wide analysis to be effective and thus should form part of a comprehensive and coordinated traffic safety program.

f. Effect of Post-Accident Injury Care

Studies show that there is a critical one hour period following a serious injury accident. The chances of a victim's survival are excellent if transported to a hospital or trauma centre within that time. Nearly 70% of fatal accidents in Alberta occur in rural areas. The Board assumes that if the presence of trauma centres can reduce numbers of fatalities, they could reduce the severity of bodily injuries as well. The Government should try to identify the areas where serious injury accidents occur with some regularity. The Government should then investigate whether the benefits would exceed the costs of establishment of a trauma centre in any of those areas.

The second aspect of post accident injury care is the existence of appropriate facilities for traffic accident victims requiring long term rehabilitation. On the one hand, the costs of such facilities are considerable and are likely to produce improvement in only a minority of cases. On the other hand, the automobile insurance system requires that accident victims should have restored as far as possible the quality of life enjoyed before the accident. This aspect of reduction of accident costs requires a careful analysis of the costs and the benefits of expanding such medical treatment facilities.

g. Recommendations

The Government should:

1. set up a coordinated approach to traffic safety and carry out a unified policy of safety measures to reduce traffic accidents in Alberta.
2. engage police in a year round program of primary enforcement of the seatbelt law.
3. support federal authority responsible for vehicle safety standards requiring airbags and automatic restraint systems in new vehicles.
4. double penalties for unsafe speed and other traffic offences most often committed in injury accidents.
5. reassess the use of police resources in urban and rural areas to target drivers who commit large deviations from average traffic speeds, and who commit traffic violations most often correlated with injury accidents.
6. upgrade the Check Stop program, by the following:
   (a) promoting the authorization of police to administer breath tests to all drivers,
   (b) targeting nighttime hours, and rural areas,
   (c) operating it more frequently during the year and,
   (d) publicizing the added enforcement features and results for violations.
7. carry out a graduated licensing program for new drivers.
8. make greater use of short term licence suspensions.
9. study the feasibility of raising the minimum legal age for consumption of alcohol.
10. study the feasibility of driver safety education programs for school age children to foster appropriate attitudes at an early age.
11. study the feasibility of effective rewards to engender greater care in driving.
12. require insurers to show rate rewards and disincentives on automobile policies.
13. study the feasibility of raising the minimum legal age for driving.
14. study effective methods for improvement of highway design and conditions especially in rural areas.
15. investigate the feasibility of setting up trauma and improved rehabilitation centres.

In summary, the Board concludes that reducing the frequency and severity of accidents will ameliorate the problem of increasing costs of automobile insurance. Reduction of the causes of those costs should be a priority, irrespective of any modification of the automobile insurance system.

The second method of reducing future premium costs is to change the compensation features of the existing system.

B. CLAIM COST CONTAINMENT IN THE AUTOMOBILE INSURANCE SYSTEM

The pursuit of the goal of accident prevention will not eliminate all accidents. It will succeed only in bringing about some reduction in the loss costs. Thus, victims will continue to require compensation and the need for automobile insurance will remain.

Alberta motorists must buy third party liability insurance to operate motor vehicles in the province. If the insurance supplied must be affordable and available to them, and if that goal requires maintenance of the cost of automobile insurance at constant, or at least acceptable levels, then the system must adjust the compensation or benefits side of the ledger. The adjustment must be a reduction or limitation of the amount of monetary compensation provided to accident injury victims.

There is a variety of methods by which to limit the amount of compensation provided by the automobile insurance system and thereby reduce the cost of insurance. The variety is a function of the different degrees of tort and no fault contained within alternative models. The cost savings potential varies with each model.

The Board viewed the models as a series of choices arrayed across a spectrum. In its spectrum, the current system described as a tort system with minimal no fault benefits appears at one end[57] and the alternative known as the pure no fault system appears at the other end. Between these two poles exist all remaining variations, although the Board did not examine all possible models. The Board chose five alternatives for comparison with the current model. Figure

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[57] Although in theory, a tort system without any no fault feature would occupy the point at the extreme left of the spectrum.

19 shows the spectrum of models chosen for its study. The elective no fault model was placed in the middle of the spectrum although it represents choices between either extreme of the spectrum.

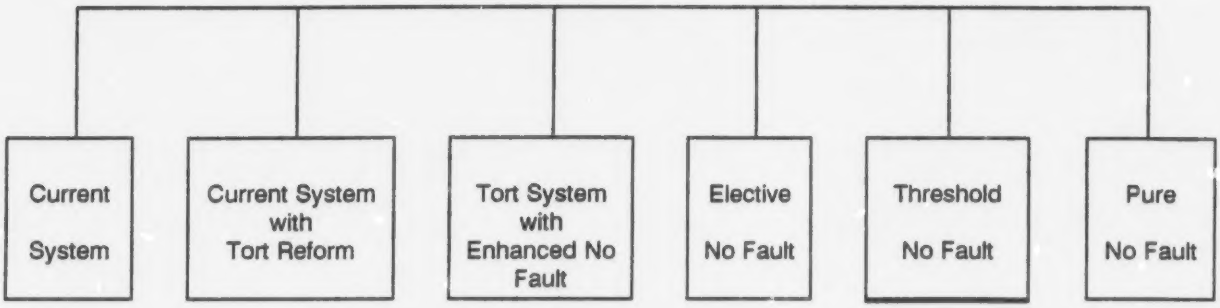
Current System
Current System with Tort Reform
Tort System with Enhanced No Fault
Elective No Fault
Threshold No Fault
Pure No Fault

Figure 19

The comparison begins with a brief description of the primary features of each scheme. A discussion follows about the criteria used to evaluate the current system and the alternatives. Each model is evaluated in light of the criteria and the conclusions drawn in the context of price stability, are reported.

1. DESCRIPTION OF EXISTING MODEL AND FIVE ALTERNATE MODELS

a. The Current System

The existing system in Alberta reflects common law principles of tort law supplemented by certain modifications prescribed by statute, including a scheme of modest no fault benefits.

(i) Tort Features

The tort principles of the system provide that where a person suffers injury or loss in an automobile accident, compensation is recoverable by court proceedings if the person can prove that the fault or negligence of another in the use or operation of a motor vehicle wholly or partly caused the injury or loss. Fault or negligence is established where the driving conduct in question has fallen below the standard of reasonable care expected of normally prudent motorists. Statute[58] has modified the fault principle to allow victims who have themselves contributed to the cause of the accident, recovery from the wrongdoer of a portion of the damage or losses sustained. As well, statute law requires that every motorist have insurance coverage with limits of at least $200,000. This coverage protects him or her from liability if his or her use or operation of a motor vehicle causes injury or loss to another.[59]

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[58] Contributory Negligence Act, R.S.A. 1980, c. C-23, ss. 1(1) and 2(1).

The tort principles also provide that the compensation recoverable is that sum of money judged needed to restore the victim, as far as possible, to his or her pre-accident position. Such compensation will include payment for loss of earnings, past and future, medical and rehabilitation expenses, cost of future care and out-of-pocket expenses. These damages form the class of claims known as pecuniary losses. Such compensation will also include payment for pain and suffering and loss of enjoyment of life. These damages form the class of claims known as non-pecuniary general damages.

Statute law has extended the scope of compensation in some instances. For example, dependants may sue for bereavement and losses resulting from fatal accidents.[60] Judgment interest is recoverable upon monetary awards from the date of the loss until the date of judgment. This award compensates the victim for the loss accruing in the period for which he or she was out of the funds.[61]

Judicial authority has also extended the limits of compensation. For example, awards for future cost of care and loss claims of dependant survivors of fatality victims generate interest income earned on the award which is taxable in the victim's hands. The victim will claim an additional sum, known as gross-up, to compensate for the impact of such taxation. Judge-made law has declared its approval of awards for gross-up.[62]

On the other hand, judge-made law has also limited the scope of compensation in other instances. The most significant limit is the upper monetary limit of $100,000 (adjusted for inflation to about $225,000 in 1991 dollars) established by the Supreme Court of Canada in the Trilogy of cases.[63] This limit sets the maximum amount for non-pecuniary general damages awardable to victims with catastrophic injuries for compensation for pain and suffering, loss of amenities, enjoyment and expectation of life.[64]

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[59] Highway Traffic Act, R.S.A. 1980, c. H-7, Part 4; Insurance Act R.S.A. 1980, c.I-5, Part 7.

[60] Fatal Accidents Act, R.S.A. 1980, c. F-5, s.3.

[61] Judgment Interest Act, S.A. 1984, c. J-05, s.2(1).

[62] fn 29, supra.

These are the most important features of the tort component of the current automobile insurance system. The no fault features are described below.

(II) No Fault Features

Legislative amendments made mandatory a scheme of no-fault benefits to the tort system of compensation in Alberta.[65] The intent of the scheme was to provide certain minimum accident, medical, death and income replacement benefits to any victim of a motor vehicle accident in Alberta who has automobile insurance. The benefits are available to any such victim irrespective of his or her fault or negligence in incurring the loss. If the victim is entirely at fault for the losses or injury he or she sustained, the recovery under the no fault benefits scheme is the legal limit of recovery in Alberta. If the victim is entirely or partially free of fault for the loss, he or she could claim for the balance of damages and losses from the wrongdoer by virtue of the tort recovery rights described earlier.

The specific no fault benefits provided under the current scheme are set out in Exhibit 1.

b. The Current System with Tort Reform

The most conservative method of adjustment of the current system to reduce the size of damage awards is to retain the tort system in principle and carry out certain tort reforms.

These reforms include the following:

(i) some form of reduction of recovery in tort for non-pecuniary general damages,

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[63] fn 28, supra.

[64] Judicial authority has also established some restrictions upon the right of a victim to recover benefits from a collateral source. Ratych v. Bloomer (1990), 73 O.R. 385 (S.C.C.).

[65] An act to amend the Insurance Act S.A. 1971, c. 53, s.300.1.

(ii) reduction of damage awards by subtraction of any recovery of benefits from collateral sources,

(iii) introduction of a rule for mandatory structured settlements in serious injury cases,

(iv) allowance for the regulatory adjustment of prejudgment interest, and

(v) allowance for separation of survivors' claims arising from fatal accidents.

These reforms will be described in turn.

(i) Reducing Recovery of Non-Pecuniary General Damages

The general principle of tort compensation is that victims should receive full redress for pecuniary and non-pecuniary damages suffered. However, the courts have contained non-pecuniary general damage awards by setting an upper limit on the amounts recoverable in the most serious injury claims.[66] There is thus some precedent for limitation of recovery of non-pecuniary general damages.

As shown, in 1990, 47.7% of total bodily injury claims costs were attributable to payments of non-pecuniary general damages. Bodily injury claims costs equalled about 58.5% of overall loss costs.[67] If recovery of non-pecuniary damages was dropped entirely, it has been estimated there would be savings of about 26.7% in overall loss costs.[68] Such a reform would solve the problem of premium stability. Some argue however, that such reform would eliminate the essential characteristic of the tort system.

If the right to recover such damages was merely reduced, the cost of insurance would decrease in proportion to the amount of the reduction. Some argue that reduction rather than elimination of this right of recovery would preserve the essence of the tort system.

As shown in Figure 13, 83.1% of costs of claims between $1 and $10,000 represent payment of non-pecuniary general damages. Eliminating claims for non-pecuniary general damages of less than or equal to $10,000 would eliminate about 18% of claims costs.[69] The elimination of those claims would also eliminate party and party costs and judgment interest on those claims. Thus the cost savings should be somewhat higher than 18 percent.

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[66] fn 28, supra.

[67] Trebilcock and Chapman, fn 2, supra, ch 4 p 119.

[68] Trebilcock and Chapman, fn 2, supra, ch 4 p 142.

[69] Letter from Joe Cheng, July 11, 1991.

Non-pecuniary general damage payments represented 57.1% of claims between $10,000-$75,000. If claims in this class were all discounted by a deductible of $10,000, there would be further savings of claims costs.

Claims over $75,000 showed 18.2% of total payments attributed to non-pecuniary general damages. However, the relatively lower percentage in this class might be a function of the limitation imposed by the court in the Trilogy.[70] A discount of all non-pecuniary general damage claims in this class by a deductible of $10,000 would produce further savings to the system. On the other hand, under the current system, the most severely disabled already bear the burden of cost containment by the limit set by judicial authority. Thus, it may not be fair to further reduce the limit of recovery to those victims with catastrophic injuries.

An alternate method of reform is the restriction of tort recovery for any minor or moderate injury claims falling below some specified verbal or monetary limit. This reform would eliminate many less serious non-pecuniary general damage claims that are costly to the system in comparison to the severity of the losses.

Another reform of compensation for non-pecuniary general damages is the replacement of awards received through judgments or settlements by a schedule of standardized payments which prorate awards between the upper and lower limits described above.

The extent of the savings attainable by the latter two reforms would depend upon the location of the limit in the former case, and upon the size of the payments in the latter case.

(ii) Abolition of Collateral Benefits Rule

Traffic injury victims in Alberta may have the right to recover benefits for their injury from other sources. These other, or collateral sources include insurance policies privately contracted for, disability plans furnished by an employer, unemployment insurance and social welfare benefits and pensions under the Canada Pension Plan. Under the tort system, the existence of collateral source benefits generally will not reduce the responsibility of the tortfeasor to the victim. In Alberta, although a victim has recovered income replacement benefits from an employer, he may still claim the same from the tortfeasor.[71] In principle, he should then account to his employer for recovery made of that income loss. In practice, such accounting rarely occurs. Alternatively, in some circumstances, the collateral source may exercise a right of subrogation directly against the tortfeasor.

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[70] fn 28, supra.

If the existing collateral benefits rule were abolished, the Board estimates there would be a reduction in the loss costs of about 2 percent.[72]

(III) Mandatory Structured Settlements

In Alberta, the court usually assesses damages in a lump sum. Such damages are not taxable income, however the income earned from that lump sum, once invested by the victim to produce income to meet the costs of future care or the income awards from fatal accident cases, is taxable.

The courts award an additional sum, referred to as gross-up of the future care or loss of income award. The award is to give the victim enough funds to pay for the necessary future care or amenities of life that produce full compensation, after accounting for the effect of taxation. Studies estimate gross-up claims amount to about 35% of each future care award made.[73]

Structured settlements are agreements arrived at by litigants for periodic payments instead of a lump sum award for all or part of a damage award. Such periodic payments are tax free. However the court or the defendant cannot impose structured settlements upon the plaintiff victim without consent. Plaintiffs have a right to insist on a lump sum award with its gross up for taxation. If the plaintiff and the defendant agree to a structured settlement, they likely are apportioning between themselves a savings of the payment representing the gross up award. The result is a higher periodic damage award to the plaintiff than would be received as a lump sum settlement. The Board concludes that structured settlements made mandatory by law would produce modest cost savings of about 0.3 percent.[74]

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[71] fn 18, supra.

[72] Trebilcock and Chapman, fn 2, supra, ch 4 p 142.

[73] Trebilcock and Chapman, fn 2, supra, ch 4 p 132.

(iv) Prejudgment Interest

In Alberta, the Judgment Interest Act[75] requires the payment of interest upon awards for non-pecuniary general damages at an annual rate of 4 percent. Interest is payable upon pecuniary damages at a rate set annually by the regulations from the date of the loss until the date of judgment. The real prejudgment interest rate for non-pecuniary general damages has been historically closer to three percent.[76] The interest rate should approximate the historical rate on average over the long term. As such, the statutory rate has probably produced some overcompensation to victims on non-pecuniary general damage awards. The solution is to fix the judgment interest rate on non-pecuniary general damages annually by regulation. Such reform in any event would produce only very modest savings.[77]

(v) Survivors' Actions in Fatal Accidents

The Fatal Accidents Act[78] prohibits more than one action in respect of the same subject matter of complaint. Some argue that the requirement obliges plaintiffs to join other possible relatives to their claim which encourages claims of a minor nature. If the law allowed each relative to bring his or her action separately, it might eliminate several trivial claims and reduce costs associated with them. The Board expects only modest savings from this reform.[79]

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[74] Trebilcock and Chapman, fn 2, supra, ch 4 p 142.

[75] fn 61, supra.

[76] Trebilcock and Chapman, fn 2, supra, ch 4 p 138.

[77] Trebilcock and Chapman, fn 2, supra, ch 4 p 142.

[78] fn 60, supra.

[79] Trebilcock and Chapman, fn 2, supra, ch 4 p 142.

(vi) Summary

It is not possible to estimate all the likely cost savings resulting from some, or all, of the above described reforms. As stated, elimination of recovery of all non-pecuniary losses is estimated to produce savings of 26.7% of overall loss costs. Elimination of only non-pecuniary losses below a prescribed floor would still produce significant savings. The tort reforms other than those which affect the right of recovery for non-pecuniary general damages taken together would likely save close to 5% of the current overall loss costs.

c. The Tort System with Enhanced No Fault Benefits

This was the model proposed for Ontario in the Osborne Report.[80] It preserves all rights of recovery under the tort system. However, it proposes to enhance the no fault benefits with the object of reducing the need to pursue the rights of recovery of losses resulting from tort. This model assumes the abolition of the collateral benefits rule. Thus a claimant must first deduct from his no fault benefits any indemnity payments such as unemployment insurance and employment disability benefits, paid or payable. As well, the victim must first deduct all no fault benefits from the final tort damage award. Exhibit 1 displays the no fault benefits contemplated under this scheme.

If this model were to be implemented in Alberta, it would be necessary to increase substantially the amounts of the no fault benefits under the existing system. All victims of automobile accidents could then claim such benefits. However, the victim would have to deduct from third party judgments or settlements, all automobile insurance benefits. In theory, the cost savings resulting from tort reforms should offset the costs of the enhancements. The Osborne Report expected the cost savings to decrease premiums.[81] However, there is some doubt about the savings attainable under this model. American data suggests that enhanced or add on no fault compensation systems usually increase overall automobile injury coverage costs.[82]

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[80] The Osborne Report, fn 3, supra at p 567-596.

[81] The reduction in claim costs was estimated to be approximately $62 to $70 million per year. The Osborne Report, fn 3, supra, Volume II Appendix III.

d. The Threshold No Fault System

This model ("the Ontario model") has been in operation in the Province of Ontario since June 22, 1990. It features extensive no fault benefits similar to those proposed under the enhanced no fault model. It also abolishes the collateral benefits rule. However, the Ontario model has a higher income benefit and a lower student disability benefit. The restriction upon recovery of non-pecuniary general damages is a verbal threshold. Thus, it prevents access to the tort system for all traffic accident victims except cases of death, permanent serious disfigurement, or permanent serious impairment of an important bodily function caused by continuing injury which is physical in nature. The Osborne Report said that one part of the rationale for the threshold no fault system was a social concern that the more seriously injured be permitted to seek compensation for both economic and non economic loss. The rationale also required that those losses be assessed on an individual case by case basis. The Osborne Report stated that any automobile insurance compensation plan excluding this social concern would offend the public's expectations and sense of fairness. It was said that the public's sense of what is right requires that fault be accounted for in the compensation process. Another part of the rationale is the need to limit third party costs in order to pay no fault benefits to all traffic accident victims.

The system resembles the threshold model in place in the State of Michigan. Exhibit 1 displays the no fault benefits under the Ontario and the Michigan models.

The Ontario threshold system expected to eliminate the right to sue for about 88% of traffic injury victims.[83] Under the Ontario model, there is no recovery for moderate claims for non-pecuniary general damages, or for psychological injuries. Claimants with relatively high incomes will not receive full compensation for income loss, although they may choose to buy additional coverage.

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[82] Trebilcock and Chapman, fn 2, supra, ch 5 p 168.

[83] Trebilcock and Chapman, fn 2, supra, ch 6 page 179, footnote 9.

e. The Pure No Fault System

The pure no fault automobile insurance system is in place in the Province of Quebec. Its primary feature is the elimination of all rights and remedies recoverable by lawsuit for bodily injury due to negligence in motor vehicle accidents. Instead, the system provides comprehensive benefits to all residents of the province. The benefits include payments for actual economic loss, out-of-pocket expenses, rehabilitation, pain and suffering and loss of enjoyment of life in some instances, and death and funeral benefits. Automobile insurance premiums based on a flat rating system finance the plan. The benefits of the plan require deduction of any payments made under the Quebec Pension Plan or the Act relating to industrial accidents and occupational diseases. Exhibit 1 displays the no fault benefits under the Quebec system.

There is considerable support for the pure no fault automobile insurance model.[84] However, many see it as merely the first step in the implementation of a comprehensive disability compensation plan. Some of the arguments supporting this system are that it provides benefits without delay, it guarantees protection for economic loss, it returns more of the premium dollar to the victims because the system reduces transaction costs, it provides greater accuracy of the assessment of the future needs of the victim, and it eliminates the imprecise yardstick of fault finding as a basis of compensation.

The compensation for economic losses under the Quebec system is similar to the Ontario model for claims below the threshold. However, claimants in Ontario with high incomes who can clear the threshold will achieve greater economic recovery than similarly situated claimants under the Quebec system. The compensation for non-pecuniary general damages for cases passing the threshold in Ontario or in tort in Alberta is higher than that awardable for permanent injury under the Quebec system. The Quebec model offers higher death benefits than the Ontario model. However, the Quebec plan offers no compensation for non-pecuniary loss in the case of death. A death benefit is available under the Ontario model.

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[84] The Ontario Task Force on Insurance (see OTFOI A Pre-Publication of the Final Report (1986) Vol 1 p 105) as well as a number of tort scholars, (see the Osborne Report, fn 3, supra, p 453).

f. The Elective No Fault System

This model allows consumers to choose from alternative packages. One package provides no fault benefits with no right to claim under tort. The other package requires the insured to waive the no fault benefits but preserves the right to pursue tort claims for full recovery. In short, the consumer may choose either first party no fault insurance or third party liability insurance. Under this scheme, if two motorists with first party insurance collide, each looks to his own insurer to cover his losses. If two motorists with third party insurance collide, each pursues her claim as she would under the tort system. If a motorist with first party insurance collides with a motorist with third party insurance, the former seeks recovery for his losses from own insurer. He is not liable for the other motorist's losses, even if he was at fault. The second motorist would seek recovery from her own insurer for full tort recovery by proof of negligence of the first motorist.

The elective no fault or choice model recognizes there may be genuine divergences in consumer preferences between tort automobile insurance systems and no fault or partial no fault regimes.

There are many variations among proposed elective or choice models. The model examined in this study is that proposed in 1989 to the Ontario Automobile Insurance Board by the Insurance Bureau of Canada.

As stated, the choice model allows motorists to purchase either a tort policy or a no fault policy. The tort policy provides rights which resemble the rights under Sections A and C of the current automobile insurance policy in Alberta. However, the tort policy under the elective model excludes all no fault benefits. The tort policy assumes tort reforms with respect to prejudgment interest, collateral benefits, and gross up for income tax. It further assumes no recovery for non-pecuniary general damages under a value of $10,000.

Exhibit 1 sets out the benefits provided by the no fault policy option. The choice model operates according to certain rules explained to the consumer in advance of a policy purchase.[85]

2. EVALUATION OF CURRENT AND ALTERNATE MODELS

There are inherent problems in trying to evaluate the current system and its alternatives. The first problem concerns a basic disagreement about what goals the tort system serves. For example, some scholars argue that the tort system promotes deterrent goals. They expect the features of the system to provide incentives and disincentives to promote prudent driving conduct that avoids or lessens accident costs. Thus the threat of civil suits for damages to victims and criminal and regulatory sanctions should induce drivers to avoid conduct that will result in legal consequences to themselves. The effect of the civil or criminal sanctions is to internalize the accident costs to those whose faulty conduct causes traffic injuries.

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[85] The IBC choice model has the following rules:

1. Motorists are deemed to have chosen the tort option until a clear election has been made in favour of the no fault option.
2. The choice of the purchaser of the insurance binds the spouse and the relatives of the policy purchaser who are dependant upon them.
3. Where members of a household own separate vehicles, they may insure such vehicles separately, and thus choose different options. However, when spouses choose different options, dependant children are bound by the purchaser's decision.
4. Policy holders can reelect at any time provided that the option in force at the time of any loss will govern claims arising from that specific loss.
5. Persons who have not elected a no fault policy, because they have no insurance and are not the spouse of or a relative financially dependant upon a policy holder will remain under the tort scheme.
6. An election once made governs, whether the insured is a driver, pedestrian or a passenger injured anywhere in North America.
7. All injury claims under either option must be asserted against the claimant's own insurer.
8. If the accident occurs outside the province, and the insured has choosen the no fault option, she will receive the no fault benefits, but the insurer will have a right of subrogation.
9. Persons residing outside the province but injured in the province may normally sue only in tort in the province.
10. If the accident occurs within the province, and the person at fault has one of the policy options, the insurer has no rights of subrogation against any other person.
11. If a pedestrian is injured by an automobile in the province, and is insured under wither option, the claim is made against his own insurer. If the pedestrian has no insurance, he can sue in tort.
12. Insured occupants of vehicles injured in accidents in the province must claim against their own insurer.

- Trebilcock and Chapman, fn 2, supra, ch 8 p 230-233.

Other scholars emphasize the goal of distributive justice. They consider that traffic accidents are caused mainly by momentarily inadvertent driving conduct and that accident costs should be borne collectively by society, or at least, by all motorists. They say that the measure of a tort system and the alternatives is the capacity to spread risk and to quickly, cheaply and effectively compensate victims to restore them as far as possible to their pre-accident state.

A third view is that tort law should seek to attain corrective justice, by requiring the wrongdoer to restore the victim as far as possible to his or her pre-accident status. This view does not ask the system to deter future behaviour of other potential wrongdoers. It does not expect the system to compensate victims whose injuries did not result directly from the faulty conduct of another. Instead, this view seeks to correct past injustices by requiring redress of losses.

Each viewpoint has its critics. Some argue that tort law oriented to the goal of deterrence cannot consider all of the possible agents that may have contributed to an accident. Others argue that if no injury occurs, certain faulty conduct may escape investigation and detection.

Some argue that a tort system oriented to the goal of distributive justice is unable to consider the parties who are best able to spread risk or compensate losses. They argue that such a system cannot promote a coherent principle of distributive justice.

The second problem in the evaluation process is the uncertainty in the proof of how well the current system or any alternatives to it achieves these goals.[86] Professors Trebilcock and Chapman have drawn from all of the viewpoints described above five criteria by which to evaluate and compare the systems selected for study. They have emphasised that the weight to be attached to each criterion will vary depending upon the viewpoint chosen, and that each model must be considered in a total systems analysis. They note that their evaluation included judgments and did not include assessments of any other models not selected for the subject study. Finally, they assumed the implementation of the regulatory and public enforcement reforms and tort reforms (excluding reduction of non-pecuniary general damage awards) discussed earlier. With these caveats in mind, the Board adopted their criteria which appear below:

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[86] Trebilcock and Chapman, fn 2, supra, ch 1 p 5-10.

1. Deterrence/Prevention - How well does each model deter or prevent accidents?
2. Compensation relating to Victim Coverage - How many traffic victims are compensated through the model under consideration? How many are compensated from other sources and in each case, how adequately?
3. Compensation relating to Cost Internalization - how well does the model internalize the cost of accidents to driving activities generally? Does the pricing mechanism, whether by premiums or other levies, effectively assign loss costs to the drivers who cause or contribute to those loss costs?
4. Operational Efficiency - How well does the model achieve the above three objectives by a decrease of private and social transaction and administrative costs and by increased speed of delivery of benefits?
5. Premium Costs - What will be the cost of insurance under each model?

The evaluations of the current system and its alternatives are described below.

a. The Current System

(i) Deterrence/Prevention

Some scholars have argued that once a tort system includes third party insurance, conversion to a first party or no fault system is unlikely to reduce traffic safety. The data supporting this viewpoint show that most drivers commit driving errors. As such, this viewpoint considers that it wrong to think that most accidents are caused by a small group of hazardous drivers.

Despite these data, many people accept that civil and criminal sanctions do affect driving behaviour in some way. Many also accept that insurance premium levels geared to exposure levels reduce driving activity, which in turn reduces accident rates. Finally, many people agree that tort law stigmatizes certain conduct and helps to reinforce socially responsible attitudes to risk taking.[87]

The Osborne Report stated that injuries leading to tort actions or penalized infractions sensitize drivers somewhat to the consequences of that behaviour. Thus, the goal should be to seek the maximum behaviour-change impact from each accident experience. It stated that moral values implicit within the tort system could produce fairness and justice, and that the public understands and accepts the rules of the road, regards as just that individuals be responsible for individual actions, and would not consider it fair to regard motor vehicle accidents in general as morally neutral. For example, most motorists believe that the system should not compensate a drunken injured driver in the same way as a sober one. It concluded that the tort system performs some modest deterrent function in the motor vehicle context, even if the impact is not empirically demonstrable.[86] It said that driver behaviour may be marginally but positively affected not through tort law by itself but by what it stands for. It cautioned against abolishing a system which may have some, if unmeasurable, effect on accident prevention.

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[87] Trebilcock and Chapman, fn 2, supra, ch 2, p 30-34.

Professors Trebilcock and Chapman concluded that the current system best attains the goal of deterrence and accident prevention. They reasoned that the more a model removes tort cases, the greater the reduction of incentives for careful driving. Under the current system, a large proportion of self-inflicted costs of careless driving are borne by the victim. They argue that under no fault models, a sensitive risk rating regime could internalize self inflicted costs of careless driving. However, the premiums would not reflect the costs such drivers inflict on others.

The Board takes the view that an automobile insurance system can and should try to deter driving conduct that may cause or contribute to accidents. It can and should try to encourage driving practices that reduce risk taking, by criminal, civil and administrative sanctions and incentives. The Board senses that the motoring public holds the view that certain kinds of driving conduct are socially irresponsible and that the system should contain some effective measures to reduce or eliminate the same.

As such, the Board is of the view that experience or risk rating is a necessary element of the system. It concludes that experience rating stigmatizes certain driving conduct and encourages higher levels of driving care. The risk rating mechanism is most effective when it can function properly. The elimination of rating variables weakens the effectiveness of the risk rating system. An example is the recent decision of the Court of Queen's Bench in Co-operators General Insurance Co. v. Alberta (Human Rights

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[86] The Osborne Report, fn 3, supra, p 549.

Commission)[89] requires automobile insurers to quit the use of gender as a rating variable.

The Board agrees that, among the models examined, the current system in Alberta is the most effective in achieving the element of deterrence. It is the most effective because it permits victims to resort to the court system to obtain compensation from wrongdoers. As a result, the system induces drivers to use care in driving to avoid involvement in the court process. It also induces drivers to avoid increases to their premiums as a consequence of at fault accidents.

(ii) Compensation - Extent and Adequacy of Victim Coverage

As stated, the principle of compensation under the current system is to return a victim as far as possible to the position he or she was in before the injury. Where a victim proves fault and receives the entirety of the judgment awarded, he fully recovers his economic and non-economic losses. In fact, recovery may be greater than 100 per cent due to recovery of collateral benefits, the victim's own contributory negligence and recovery of tax free gross wages. Even where traffic victims cannot prove fault, most receive some minimal compensation through the current system.

About 50-60% of traffic victims under tort systems have a valid tort claim.[90] In Alberta, unlike most other jurisdictions, there was until recently a guest passenger rule.[91] Thus, the percentage of victims with valid tort claims in this province was probably somewhat lower than under other tort systems.

About two thirds of injured persons in the claims survey were shown not to be at fault. These include victims who, although not at fault, may not have a valid tort claim. A victim who can show fault must rely on the ability of the defendant to satisfy an award for his or her damages. In instances where the defendant is uninsured or underinsured, the victim's recovery may be incomplete. The Alberta data showed that in 1990, 95% of defendants carried at least $500,000 limits of third party liability insurance coverage.

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[89] (1991) 80 Alta.L.R.(2d) 73, under appeal to the Alberta Court of Appeal.

[90] Trebilcock and Chapman, fn 2, supra, ch 2 p 34.

[91] fn 58, supra, s3, repealed s4, 1990.

As stated, most claimants' losses concern minor injuries with small economic losses. Many such claimants may receive over 100% of their gross wage losses. However, victims with catastrophic injuries are undercompensated due to the claims settlement process and due to insufficient insurance coverage. In short, the tort system does not fully compensate all traffic victims.

Professors Trebilcock and Chapman recommended consideration of the criterion of victim coverage first in relation to the percentage of all traffic victims compensated under the system. They recommended consideration of this criterion second in relation to the adequacy of coverage. They concluded that the current system ranked fifth or last of the models examined. The reason was that although those with a valid tort claim can usually recover full economic and non-pecuniary losses, about 40% of traffic victims do not have a valid tort claim. These victims either have no claim against available insurance or have a claim for only minimal benefits.

In the Board's view, the adequacy of victim coverage under the current model depends in part on whether Albertans desire fault as the principal feature of the compensation system. Assuming Albertans affirm the primacy of this principle, the Board recommends remedy of the inadequacy of the available coverage for victims by increases to the no fault benefits under the current scheme.

(iii) Cost Internalization

The existing automobile insurance system functions upon the principle of differentiation between drivers who bring a high risk of loss into the system and those who do not. The Osborne Report stated that fairness in the allocation of the cost of automobile accident compensation requires the setting of premiums under sound insurance principles. This requires that accident costs be internalized to the drivers most likely to cause them, by risk rating. This process differentiates premiums among drivers by reference to their previous driving history of at fault accidents, traffic convictions and the accident rate of the statistical group to which the driver is assigned. Insurers determine premiums prospectively, or on the likelihood of claims in the future. Young drivers often are charged a higher rate than other motorists. If insurers rigidly applied the actuarial principles operating upon the risk rating function, the cost of insurance would be prohibitive for some drivers. In practice, insurers typically limit or cap the rates that are justified on strict actuarial principles. In addition, there exists a scheme known as the Facility Association.

The private industry together with the Facility Association tries to provide automobile insurance to high risk drivers who otherwise have difficulty finding insurance in the marketplace. However, when the Facility Association provides insurance to high risk drivers who otherwise could not purchase insurance in the regular market, it means that all other groups of drivers subsidize that group for the cost of insurance or the cost of the losses incurred by the system.

Where an automobile insurance system would otherwise prohibit or restrict high risk drivers from driving, the risk of losses would be reduced. In turn, the cost of insurance would drop. Where an automobile insurance system accommodates all drivers, whatever the risk they present, other drivers must pay more for insurance to cover the cost of those risks. In Alberta, the risk rating principles used in determination of premium levels in the automobile insurance system are muted by the countervailing requirement that the system provide reasonably affordable insurance to the motoring public. The industry does not apply the risk rating principles rigidly because third party liability insurance is compulsory in Alberta. The trade off is that cross subsidization of high risk drivers by low risk drivers compromises cost internalization aimed at by the operating of the risk rating principle.

There are many private and public income replacement schemes in Alberta which limit the goal of cost internalization of traffic accidents to wrongdoers. These include Workers' Compensation, Canada Pension Plan, Unemployment Insurance, and employers' accident and disability insurance plans. On the other hand, the right to recover collateral source benefits and the right of insurers to subrogate does promote cost internalization. For example, the Alberta Health Care system pays for virtually all medical and physical rehabilitation expenses. Professors Trebilcock and Chapman concluded that the current system best achieves the goal of corrective justice. It does so by allocating accident costs to wrongdoers where they have caused injury to others or by denying recovery to persons at fault for their own injuries.

(iv) Operational Efficiency

The Alberta data show that the current system allows considerable delays in payment of benefits. Many of the delays could relate to the cases of serious injuries and higher pecuniary losses.[92] This result is typical of tort systems.[93] Some of the data estimate that compensation under this scheme costs as much to administer as is ultimately available to the victims.[94] The reason is that the tort system requires determination of issues of quantum of damages in every case. The data estimate the operating and claims adjustment costs to represent about one-quarter to one-third of each automobile insurance premium dollar. Studies suggest that a reduction of 10-15% of such costs could occur under a public system like that of Quebec. The data estimate claimant legal expenses under the tort model to equal another 10-15% of the premium dollar.[95] Studies estimate the cost savings attainable by conversion from tort to a threshold no fault system in ranges of 5 to 24 percent.

American studies show that in tort states, there is an average net payout of 43.2 cents of every premium dollar to claimants. By contrast, the threshold no fault states pay out 50.2 cents on average. The Osborne Report estimated that the Ontario tort system returned between 55.8% and 64.7% of the premium dollar to victims.[96] However, it warned that the exercise of estimating the percentage return of the premium dollar must be viewed with caution.[97] Professors Fluet and Lefebvre concluded that before the pure no fault plan was implemented in 1978, the Quebec system returned 59% of the premium dollar. Between 1978 and 1987 following the introduction of the plan, the net return to consumers was estimated at 77% of the premium dollar.[98]

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[92] Report on Alberta Motor Vehicle Claims Survey, fn 1, supra, p 14.

[93] Trebilcock and Chapman, fn 2, supra, ch 2 p 41-46.

[94] Trebilcock and Chapman, fn 2, supra, ch 2 p 43.

[95] Trebilcock and Chapman, fn 2, supra, ch 2 p 44.

[96] The Osborne Report, fn 3, supra at p 523.

[97] The Osborne Report, fn 3, supra at p 526.

The Board was not certain whether the above mentioned studies comparing the return to the consumer all measured the same components in each case.

From the Alberta data available, the Board noted that the average earned premium in 1990 for third party liability coverage only was in the amount of $228. The data show that the cost of claims and expenses exceeded the premium in 1990. However, there were no available data showing the claimants' legal expenses. Thus, it was not possible to estimate the percentage of premium returned to Alberta claimants. In any case, it seems there may be problems with the exercise. In 1986-1990 in Alberta, if claims costs were paid first, the Board assumes that when the premium dollar was fully spent, insurers used other funds to pay for their operating costs. However, an insurance system could not function in this fashion indefinitely. The Board thus concludes that it would be unsafe to measure the operational efficiency of the current system against the alternatives on the basis only of the data reporting the percentage of return of premium to the consumer. However, the Board accepts that any system which systemically eliminates legal costs should release higher amounts to claimants, all other things being held constant. It thus assumes that the current system likely returns the lowest percentage of the premium dollar to the consumer. It assumes that the Quebec system returns the highest percentage, and the threshold system produces the next highest percentage. It assumes that the enhanced no fault system returns a lower percentage than the threshold system but a higher percentage than the tort system.

The Board agrees that lower rates of lawyer involvement and claims litigation would release a higher percentage of benefits currently paid to claimants to compensate actual economic losses from accidents.[99] On this basis, the current system is the least efficient of the models under consideration.

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[98] "L'èvolution du prix reel de l'assurance automobile au Quebec depuis la reforme de 1978: Claude Fluet and Pierre Lefebvre, Canadian Public Policy, p 374-386, vol XVI, no. 4, December 1990.

[99] Trebilcock and Chapman, fn 2, supra, ch 2 p 45.

(v) Premium Costs

The current premium costs in Alberta compared favourably to the national average for like jurisdictions.[100] However, in comparison to the other models examined, the current system ranks fourth best. The reason is that under this model, a significant percentage of the premium dollar goes to payment of non-pecuniary losses and the higher administrative costs. These payments are a function of the principles of full compensation for pain and suffering, and compensation based on fault.[101]

b. The Current System with Tort Reform

All tort reforms considered have the effect of reducing costs of claims. The reform expected to have the most significant effect on reducing costs is the elimination or reduction of the right to claim for non-pecuniary general damages. Any reduction of the right to claim such damages would reduce deterrence by reducing the risk of increased premiums to at fault drivers. Moreover, the reduction of this right of recovery would reduce the amount of compensation to traffic accident victims under the current system. Some of these victims otherwise receive complete or more than complete compensation. The reduction of this right of recovery would also reduce the effectiveness of cost internalization. The reason is that some wrongdoers would escape responsibility for the minor injuries they cause.

On the other hand, reduction of the right to recover non-pecuniary general damages would limit premium costs. The extent of the savings would depend upon the limitation of the right of recovery.[102] The Board requested estimates of cost savings assuming reduction of all claims for non-pecuniary general damages by $10,000, and an increase from the judge made limit (in 1991 dollars) of about $225,000 for non-pecuniary general damages to $300,000 for catastrophic injuries. The estimate is that reform would produce a saving in loss costs of between $34-$40 per vehicle. The Board expects such reform also to increase operational efficiency by reducing claims adjustment and litigation expenses for many claims in the system.

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[100] Trebilcock and Chapman, fn 2, supra, ch 2 p 47.

[101] Claim Survey, fn 1, supra, p 10.

[102] An Ontario study estimated premium savings of 11.4% if a deductible of $10,000 was applied to non pecuniary general damages. The FAIR Committee, Actuarial Costing of the Enhanced Benefits Deductible Plan, June 26, 1989, p 6.

As stated, tort reforms such as mandatory structured settlements, modification of prejudgment interest rates and variation of rights of survivors in fatal accident cases would have additional modest cost saving effects. Abolition of the recovery of collateral benefits would have some adverse effect upon the criteria of deterrence and cost internalization. However, it would have some small positive effect in reducing claims costs and thus may have some limiting effect on premiums.

The Board concludes that the tort reform of reducing non-pecuniary general damages in some fashion would allow preservation of the strongest features of the tort system, that is, deterrence and cost internalization. This reform would allow the system to better attain the goals of containment of loss costs and premiums, depending on the degree of limitation on recovery of non-pecuniary general damages.

c. The Tort System with Enhanced No Fault Benefits

(i) Deterrence/Prevention

Any reduction of deterrent effects in alternate models depends upon the magnitude of the deterrence inherent in the tort law regime. Under the enhanced no fault model, there may be several off-setting effects that could increase deterrence in some instances and decrease deterrence in others. For example, first party insurers would probably pay a large portion of the loss formerly paid by negligent drivers. As a result, at fault drivers would pay lower premiums. This effect would weaken the deterrent to risky driving. Since fault for automobile accidents is usually simple to determine, first party premiums would likely increase for at fault drivers. However, the increase would be only that amount needed to cover the increased no fault payments they would receive. The increases to first party insurance premiums would not fully offset the reduced premiums paid by at fault drivers. Thus, this model in theory would dilute the deterrent benefits attainable under a tort system.

On the other hand, if the enhanced no fault benefits allow claimants who previously could not afford to litigate, now to engage in court proceedings, the model would increase the deterrent effects.

From the data to date, there is no evidence that the implementation of this model would cause any significant reduction of deterrence. This model ranked second in attaining the goal of deterrence. The reasoning for this ranking was that as one moves to the right along the spectrum of no fault options, the more cases eliminated from the tort scheme, the fewer incentives remain to induce drivers to use care in driving to avoid injury to others.

(II) Compensation - Extent and Adequacy of Victim Coverage

The data show that the enhanced no fault model compensates more traffic accident victims than the current system. The data show also that all victims significantly injured in traffic accidents will qualify for no fault benefits. Those victims who could sue for full compensation in court may continue to do so with their tort rights and remedies unaffected. There is some evidence of more under-compensated automobile accident victims with serious losses under the enhanced no fault model than under the tort system. However, other evidence shows little reduction in tort litigation as a result of change to an enhanced no fault scheme. This system is ranked first for extent and adequacy of victim coverage because it provides coverage for most traffic victims, and those victims with tort claims retain the right to sue for non-pecuniary general damages and economic losses.

(III) Cost Internalization

The theory of the enhanced no fault model is that because it provides greater amounts of benefits to traffic accident victims on a no fault basis, it reduces the need to sue. If the model indeed reduces the number of lawsuits, then it will reduce the precision of risk-rating.

There are special problems concerning operators of motorcycles and trucks. Motorcyclists suffer more damage than they cause to others. They will still benefit considering the amount of accident costs they cause, even if the enhanced no fault system produces an increase in first party premiums and a reduction in third party premiums. If the model permits subrogation against a tortfeasor, it releases the motorcyclist's insurer from paying a large differential between actual accident costs and costs expected if the operator was driving an automobile. Thus there is a negative effect on cost internalization. Truck drivers are less likely to incur injury and may be covered by other insurance schemes such as Workers' Compensation in any event. First party premiums for truck drivers will be lower but third party premiums will be higher. Since the model assumes abolition of the collateral benefits rule, cost internalization does not seem as effective under this model compared to the tort model.[103]

The enhanced no fault model ranked second in achieving the goal of cost internalization, because it preserves a strong tort component, although less than that of the current model.

(iv) Operational Efficiency

The data do not clearly show that an enhanced no fault system will reduce the number of lawsuits that would have arisen under a tort system.[104] If the enhanced no fault model does reduce litigation, there will be a reduction of administrative costs, claimants' legal expenses, and public expenditures on court adjudication. Studies show that enhanced no fault models in the United States return on average, 53.6% of the premium dollar to victims (exclusive of legal fees to their lawyers) compared to 43.2% in tort jurisdictions.[105]

There will be a more rapid initiation of delivery of benefits under this scheme, which may promote early rehabilitation.[106] The enhanced no fault model ranks fourth in achieving operational efficiency. Although many cases resolve quickly and at low cost under this model, it preserves tort rights. The result may be aggressive exercise of tort rights, which would perpetuate administrative costs and delays in payment of tort compensation.

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[103] Trebilcock and Chapman, fn 2, supra, ch 5, p 160-162.

[104] Trebilcock and Chapman, fn 2, supra, ch 5, p 162.

[105] Trebilcock and Chapman, fn 2, supra, ch 5 p 163.

[106] Trebilcock and Chapman, fn 2, supra, ch 5 p 166.

(v) Premium Costs

The Osborne Report estimated that implementation of an enhanced no fault scheme in place of the then existing tort system would produce premium savings of about $12.52 to $19.52 per insured vehicle.[107] Professors Trebilcock and Chapman doubted the accuracy of the estimate, however. They found from American data that enhanced no fault systems tended to increase overall automobile injury coverage costs as a result of changes from tort regimes.[108] The enhanced no fault model ranked fifth, tentatively, because of the potential to increase the cost of automobile insurance.

d. The Threshold No Fault System

(i) Deterrence/Prevention

As stated, the Ontario threshold system expected to limit the right to sue to about 12%[109] of traffic accident victims. The reduction in the right to sue suggests a reduction in the effectiveness of deterring risky driving. There will be a more significant increase in payment of first party benefits and a greater reduction of third party premiums for negligent drivers than they would have faced under the tort or the enhanced no fault models. The reason for these effects is fewer lawsuits and more cases where the tortfeasors' insurer would not have to pay the full costs of the victim's losses. Thus premiums for negligent drivers would drop. These effects would probably reduce the precision of risk rating and thereby weaken deterrence. It is also thought that the further a system departs from the fault principle, the greater the risk of socializing drivers to regard risk taking as divorced from blameworthiness.

There are few reliable data to support the theory that a threshold system significantly reduces deterrence. On the basis of the reasoning that the more tort features removed from a model, the fewer the deterrent effects, this model ranked third in achieving deterrence goals.

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[107] The Osborne Report, fn 3, supra, p 585-589.

[108] Trebilcock and Chapman, fn 2, supra, ch 5 p 168.

[109] Trebilcock and Chapman, fn 2, supra, ch 6, p 179, fn 9.

(II) Compensation - Extent and Adequacy of Victim Coverage

The threshold regime will compensate a significantly greater number of traffic accident victims than the tort system. This is because such victims can obtain compensation for certain of their losses regardless of fault. American studies found that after states introduced threshold systems, the proportion of victims receiving any compensation increased by about 7 percent. The threshold model is comparable to the enhanced no fault model on this criterion. The data do not suggest any superiority of threshold over enhanced no fault systems or vice versa.

On the criterion of adequacy of no fault benefits, both the threshold and enhanced no fault systems are superior to the current model. On the issue of recovery of non-pecuniary general damages, however, the threshold and enhanced no fault models differ strongly. The Ontario scheme bars from recovery a large proportion of injured victims with moderate non-pecuniary losses and relatively high incomes whose claims fall below the threshold. As well, claimants with psychological injuries never pass the threshold and receive no recovery of non-pecuniary losses. All such claims remain exercisable under the enhanced no fault model. Assuming compensation in excess of economic loss is overcompensation, then payments under the enhanced no fault model are likely to be greater than those under a threshold system. The threshold system ranked second to the enhanced no fault system in victim coverage compensation for two main reasons. First, it provides some compensation for most victims. Second, it permits a small percentage of victims to retain the right to sue for residual economic losses and for non-pecuniary losses if they can prove fault and pass the threshold.

(III) Cost Internalization

It may be that the threshold model weakens the process of risk-rating. If so, traffic accident costs will not be borne by high risk drivers as fully as is the case under tort or enhanced no fault schemes. Subrogation for motorcycles under the Ontario scheme may negatively affect cost internalization. However, that effect may be balanced by the right to subrogate against large commercial vehicles.

Moreover, the traffic accident victims whose losses fall below the threshold pay more than a fair share of loss costs because they forego full compensation for income loss if they are high income earners and non-pecuniary damages. Where the threshold and tort models abolish the collateral source rule, the cost internalization feature is not significantly different among them. However, where the model eliminates the right to subrogate for hospital claims as has occurred under the Ontario threshold system, there is a significant loss of cost internalization. As a result, cost internalization under this model is probably significantly worse than under the enhanced no fault model.

The threshold system ranked third because it is less sensitive to corrective justice considerations. Moreover, it removes many cases from the tort system. It shields more wrongdoers from the consequences of their conduct and externalizes many traffic accident costs beyond driving activity altogether by eliminating rights of subrogation.

(iv) Operational Efficiency

Although the threshold model eliminates many claims from the court process, the largest and most expensive lawsuits remain. It may be that some of the litigation costs merely shift to the question of what cases pass the threshold. The Osborne Report expressed doubt that the administrative savings under a threshold system would be significant, and there are some data to support that view. However, studies show that Michigan saw a reduction of 31.3% in lawsuits after it implemented its threshold system. Verbal threshold systems usually return about 47.8% of the premium dollar, but the American data show the Michigan threshold system returns about 55.1% of the premium dollar to consumers. However, the American data also show that enhanced no fault systems generally return a higher percentage of the premium dollar to traffic victims than is the case under threshold models.[110]

Finally, the Ontario threshold system is likely to be more efficient in delivery of benefits. It provides a penalty payment of 2% of the total claim value per month for insurers who do not initiate payment within 10 days of the proof of income loss and 30 days of proof of other economic losses, such as rehabilitation and medical care expenses.

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[110] Trebilcock and Chapman, fn 2, supra, ch 6 p 192.

The threshold model ranked second in attaining operational efficiency because it resolves a high percentage of cases on a no fault basis.

(v) Premium costs

The Osborne Report expressed doubt that a threshold system would produce any significant cost savings over the previous system in Ontario. It expected there would continue to be defence legal costs for the most serious cases that pass the threshold. Adjusters would still be necessary to investigate the legitimacy and extent of injuries for first party claims. The system would still require adjusters for both parties to the litigation in cases close to or above the threshold. It further doubted there would be any reduction in transaction costs.[111]

After the implementation of its threshold model, the former government of Ontario predicted premiums savings in the range of 22-27% in the Oshawa-Toronto-Hamilton area. Elsewhere in Ontario, the savings were predicted in the range of 30-35%. This effect on premium costs is far more significant than the estimated cost saving of 3.7% under the proposed enhanced no fault model.[112] However, it is too early to obtain reliable data on the extent of the savings actually achieved under the Ontario threshold system.

The threshold system ranked second in attaining low premium costs because it largely excludes non-pecuniary damages from coverage. As well, savings of administrative costs are likely.

e. The Pure No Fault System

(i) Deterrence/Prevention

The pure no fault model reduces the effectiveness of deterrence substantially because there is no third party insurance for bodily injury and no mechanism for fault determination in traffic accidents. Such a system could socialize drivers to divorce risk-taking from blameworthiness. If the insurance scheme is one of flat premium rating, or a uniform cost of insurance to all drivers, regardless of at fault accidents and traffic convictions, then it undermines the deterrence principle. Studies support the conclusion that reduced premiums for risky drivers reduce care levels and reduced premiums for young, male drivers increase risky driving. Professor Gaudry concluded[113] that the increase in accidents following the introduction of the scheme in Quebec was not due entirely to the implementation of the no fault principle in the scheme. He attributed the increase partly to enforcement of compulsory insurance. The effect was to bring previously uninsured drivers into the system which reduced levels of care. He suggested the increase in accidents was also partly due to the adoption of the flat rating premium structure. Flat premium rating resulted in an increase in the driver population comprising higher risk drivers who could not afford to, and did not drive before the Quebec government introduced the no fault plan. The increased number of higher risk drivers was thus part of the explanation for the increase in accidents.

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[111] The Osborne Report, fn 3, supra, p 528.

[112] Trebilcock and Chapman, fn 2, supra, ch 6 p 193.

Some other studies suggest that the increase in accidents was due to the elimination of the right to sue for negligent driving. However, there are difficulties in accepting such suggestion.[114] The deterrence feature is inferior under the Quebec pure no fault model by reason of the flat rating structure. However, there is no clear consensus from the data to suggest that deterrence would be less effectively achieved under a pure no fault model if experience rating were a feature of such a scheme. The question is whether extensive risk rating would or would not correct for the safety effects since first party premiums would not reflect losses negligently inflicted on third parties.

This model ranks last in attaining deterrence goals because premiums do not reflect costs inflicted on others. As well, the incentives to avoid injury to oneself are muted.

(ii) Compensation - Extent and Adequacy of Victim Coverage

A pure no fault system allows all traffic victims no fault compensation. However, it bars many claims for non-pecuniary general damages and complete economic loss that would otherwise be recoverable through the tort system.[115] After Quebec introduced the pure no fault model, estimates say that the proportion of victims receiving any compensation increased by about 20 per cent.

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[113] The Effects on Road Safety of the Compulsory Insurance, Flat Premium Rating and No Fault Features of the 1978 Quebec Automobile Act, The Osborne Report Volume II.

[114] Trebilcock and Chapman, fn 2, supra, ch 7 p 205-208.

The benefits under the Quebec model are similar to those of the Ontario model for economic loss claims under the threshold. Neither model provides compensation for non-pecuniary general damages for non permanent injuries. However, the Ontario threshold system provides more compensation for victims with high incomes who clear the threshold than is the case for similarly situated victims in Quebec. Victims in Ontario who pass the threshold receive more non-pecuniary general damages than is the case for similarly injured victims in Quebec. For example, a catastrophic injury under the current tort system and the Ontario threshold system will correct a non-pecuniary general damages award of about $225,000 (in nominal dollars) in 1991. In Quebec, the highest award attainable in 1991 is only $100,000.

By the criterion of extent of compensation, the pure no fault model is superior to the tort system. Under tort those at fault victims receive nothing and victims partly at fault can have their compensation reduced by the extent of their contributory negligence. However, under the pure no fault system, the same victims would be compensated without regard to fault. In a pure no fault system, there is relatively little uncertainty about who gets what and when, and thus victims receive benefits with very little delay.

This model ranked third in achieving victim coverage goals, because it covers most traffic victims, but severely restricts claims for non-pecuniary losses and does not cover residual economic losses.

(III) Cost Internalization

The Quebec model is inferior to the Ontario threshold model for cost internalization of traffic accidents to high risk drivers. The reason is that the former eliminates the fault principle for bodily injury claims and risk rating for determining premium costs. However, internalization of traffic costs under the Quebec plan is inferior. No fault benefits are primary, and thus all drivers probably bear the cost of driving in Quebec. The Board was advised that the plan currently is funded by automobile insurance premiums only.[116]

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[115] Officials from the Societe de l'assurance automobile du Quebec advised that injured claimants receive no compensation for non pecuniary general damages if the injury is not permanent. Where the claimant's doctor verifies a percentage of permanent disability, the award is prorated according to the maximum amount legislated for non pecuniary general damages. For example, if a claimant has an injury that leaves a 5% permanent partial disability, she will receive the sum of $5000 for non pecuniary general damages, a sum equal to 5% of the maximum sum of $100,000 for 1991.

This model ranked fifth because it does not try to internalize costs to wrongdoers on an individualized basis. Depending on the risk rating scheme, it may weaken internalization of accident costs to wrongdoers or to higher risk drivers.

(iv) Operational Efficiency

The data show that administrative costs are lower under this model than under threshold or tort systems, because of the elimination of lawsuits for damages for bodily injuries. It probably also reduces public expenditures on legal adjudication. The data are not conclusive about the actual percentage of savings attributable to the conversion to a pure no fault system. Professors Fluet and Lefebvre found[117] that the pure no fault system returned 69% of the premium dollar to Quebec motorists between 1981-1984. The Osborne Report estimated claims adjustment expense savings of no more than 5% would be attainable by converting from a tort system with minimal no fault benefits to a pure no fault system.[118] On that calculation, the pure no fault model would be more efficient than the former Ontario tort system.

There is also some debate whether the conversion to a public monopoly would produce additional savings. One study suggested the savings could be as high as 14 percent.[119] However, the Osborne

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[116] Officials from the Societe de l'assurance automobile du Quebec advise that the legislation creating the pure no fault plan provided that the Règis could borrow from general revenues if required. The initial funding supplied by the Quebec government was repaid within the first few years of operation and since that time, there has been no funding of the plan by general revenues.

[117] Claude Fluet et Pierre Lefebvre, L'Assurance Automobile au Quebec: Bilan d'une reforme (1986)

[118] The Osborne Report, fn 3, supra, p 523.

[119] Trebilcock and Chapman, fn 2, supra, ch 7 pp 212-213.

Report found no evidence to suggest that a public monopoly was more efficient in underwriting insurance than a competitive private sector. There is agreement however, that conversion to a pure no fault system would provide some administrative savings.[120]

The delivery of benefits would be more efficient under a pure no fault scheme, because no payment flows are delayed as a result of lawsuits. The reduction in payment flow delays in a pure no fault model is impressive, particularly when compared to the current tort system. For these reasons, this system ranks first for operational efficiency.

(v) Premium Costs

The data show that low risk drivers pay much higher premiums and high risk drivers pay lower premiums in Quebec compared to the Ontario threshold system.[121] Even after the increases to non-pecuniary general damages awards by legislation in Quebec after 1989, the premium levels in Quebec did not rise. The lowest premium levels of all models considered occur under the pure no fault model. For this reason, and for the administrative savings expected, it ranks first in the attainment of low premium costs.

f. The Elective No Fault System

(i) Deterrence/Prevention

Commentators have persuasively argued that this model is subject to serious adverse selection problems. They say that high risk drivers will elect the no fault option. This will result in lower premiums and fewer incentives to avoid dangerous conduct. Moreover, the more high risk drivers elect the no fault option, the higher will be the premiums payable by those drivers who elect tort coverage. As well, the latter will have to sue their own insurers for their claims and pay premiums that reflect the cost of such claims. In the result, the drivers who elect the no fault option will externalize some of their accident costs onto the drivers who elect the tort option. Finally, they say that this effect will cause increasing divergence of average premiums between the two options, which will cause tort drivers to switch to the no fault pool. This effect will convert the system to a pure no fault model.

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[120] Trebilcock and Chapman, fn 2, supra, ch 7 p 213.

[121] Trebilcock and Chapman, fn 2, supra, ch 7 p 217.

There is no clear evidence to support these criticisms. It is possible that the traffic safety measures discussed earlier could restore the loss in safety measures expected to result from this system. However, it ranked fourth in attaining deterrence goals, because of the extent to which it will eliminate the tort features.

(ii) Compensation - Extent and Adequacy of Victim Coverage

It is difficult to draw firm conclusions about the number of victims who will receive compensation and the adequacy of compensation under this model. The question depends on the number of drivers that elect each option. Under the no fault branch of the scheme, the benefits are relatively generous, however, it eliminates the right to recover non-pecuniary general damages. On the other hand, the tort option does not offer any no fault benefits whatsoever. Thus if no proportion of fault on the part of another for the loss can be proven, the insured receives nothing from the scheme. On the other hand, if the motorist who elects the tort option already has other private insurance, he will not suffer from the lack of no fault benefits under the tort option. This model ranked fourth in attaining victim coverage goals because each election requires the victim to forego significant benefits.

(iii) Cost Internalization

The choice model largely relieves negligent drivers of any financial responsibility for accident costs imposed on innocent third parties. If extensive risk rating remains a feature under both options, then the model will internalize some accident costs to high risk drivers. If the model eliminates collateral benefits recovery and subrogation for hospital claims, then it will externalize some costs to sources unrelated to driving activity.

This model ranked fourth because negligent drivers who elect tort will recover nothing, and extensive risk rating will internalize a large amount of accident costs to high risk drivers, but subtraction of collateral benefits from recovery under either option will externalize some traffic costs to sources unrelated to driving activities.

(iv) Operational Efficiency

It is difficult to draw firm conclusions about the operational efficiency of the elective model without knowing what proportion of drivers will fall under each option. However, it would probably conserve administrative costs. It would probably resolve claims more expeditiously than the tort model.

The Board noted that the Ontario Automobile Insurance Board rejected this model after its study. It is the Board's concern that the model would confuse consumers.

The elective model ranked third in attaining operational efficiency. The ranking was based on the assumption that most drivers would elect the no fault option and those electing tort would deal only with their own insurer in claims matters.

(v) Premium Costs

IBC assumed that its tort policy option contained tort reforms and excluded no fault benefits. It then estimated that the premium cost of a full package of coverage under the new tort policy option would decrease by 7.5% from adequate costing of the then standard policy.

IBC also assumed its no fault policy option contained tort reforms. It estimated that for complete coverage, the premium would decrease by 26% from an adequately costed automobile policy.

Assuming the accuracy of the IBC estimates, the new tort policy would be modestly cheaper than an adequately costed standard policy. The no fault policy option would be substantially so. However, if the criticisms pointing to the adverse selection problems are correct, then the accident rates, injury costs and the premium costs above outlined would be much higher.

The feasibility of this model is uncertain. Much depends upon the percentage of consumers electing each option. If many elected the no fault option, there would be savings in administration costs. There might well also be savings under the tort option, considering that claimants seek recovery from their own insurer. This model ranked third assuming that most drivers elect the no fault option. Since those who elect tort will not pay for no fault benefits, there will be administrative savings which could reduce the premiums below the level applicable to the no fault benefit premium level under the current system.

g. Conclusions

Professors Trebilcock and Chapman prepared a composite evaluation of the current system and the alternatives. Figure 20 shows the final results of the exercise. They found that no one model ranked best overall in the evaluative criteria. The careful analysis undertaken demonstrates that each model achieves success in attaining some of the goals desired and each model sacrifices something for that success. The Board concurred with the findings of Professors Trebilcock and Chapman showing which models best attained the goals of an automobile insurance compensation system. The conclusions are summarized as follows.

Composite Evaluation of Options

	Current System	Enhanced No Fault	Threshold	Pure No Fault	Elective
Deterrence	1	2	3	5	4
Compensation (Coverage)	5	1	2	3	4
Compensation (Internalization)	1	2	3	5	4
Operational Efficiency	5	4	2	1	3
Premium Costs	4	5	2	1	3
TOTAL	16 (3.2)	14 (2.8)	12 (2.4)	15 (3.0)	19 (3.6)

Figure 20

(i) Deterrence/Prevention

The Board concedes there is some question whether the tort system has a real capacity to deter bad driving conduct. Some argue that forces external to the compensation system, such as criminal sanctions and experience rating, are better able to achieve the goal of deterrence. They say that such external forces can apply to any automobile insurance model. The Osborne Report argued that the tort system performs some modest deterrent function and exercises some effect on accident prevention. It warned that the introduction of no fault compensation may reduce driver care in a way that is not perceptible in the short term.[122] From its examination of the alternative systems operating in Michigan, Quebec and Ontario, the Board concluded that the motoring public does believe there should be individual responsibility for individual driving conduct. The Board concludes that the tort system does perform a deterrent function and does have some effect on accident prevention. The Board considers that the automobile insurance system should contain measures to deter risky driving conduct. It concludes that experience rating is a necessary element of the system.

In view of these conclusions, the Board accepts that the current system is the most effective in attaining the goal of deterrence. It best attributes the costs of traffic accidents to wrongdoers and leads to increases in levels of driving care. The Board agrees that effective risk rating can help attain deterrence. The Board believes the tort model most effectively distributes the costs inflicted on others and it most effectively delivers incentives to prevent self injury.

(ii) Compensation - Extent and Adequacy of Victim Coverage

The Board agrees that the enhanced no fault system best provides compensation. It delivers compensation and with expedition to most traffic victims. It preserves the right to sue for fault caused residual economic losses and all non-pecuniary general damages.

(iii) Cost Internalization

The Board takes the view that fairness in allocating compensation dollars requires that premiums bear a reasonable relationship to the risk brought into the automobile insurance system by individual drivers. The process of risk-rating in Alberta traditionally occurs by differentiating premiums on the basis of an individual's previous driving record and the statistical group of which he is a member. The Board agrees that the current system ranks best in achieving cost internalization. It tries to allocate accident costs to wrongdoers and to deny recovery to victims whose own conduct caused the injury.

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[122] The Osborne Report, fn 3, supra, p 540.

(iv) Operational Efficiency

Professors Trebilcock and Chapman concluded that the pure no fault model best attains operational efficiency. It delivers compensation to victims at a lower administrative cost and in a more timely fashion than the other models examined. The Board agrees.

(v) Premium costs

Professors Trebilcock and Chapman concluded that the pure no fault model achieves the lowest premium costs. It attains savings by eliminating recovery of non-pecuniary general damages and by the administrative structure. The Board agrees.

VI. CONCLUSIONS

The Board's findings upon the issues established by the terms of reference are set out below.

A. The cost effectiveness of the current automobile insurance system for claims arising out of automobile accidents

The work performed by the Board's consultants have produced information concerning the strengths and weaknesses of the current system in its own terms and in comparison to alternate models. As a tort system with minimal no fault benefits, the current system has been reasonably cost effective. No other automobile insurance system provides more generous compensation for non pecuniary general damages. Yet, the cost of insurance in Alberta in constant dollars declined steadily from 1977 to 1989 and motorists received a more extensive insurance product for their dollar in 1989 than in 1972. As well, in the recent past motorists have paid less than the actual cost of insurance.

The data do not disclose irreparable problems with the tort component of the system. However, there is overcompensation in the cases of minor injuries, and undercompensation in the case of catastrophic injuries. Some tort claimants are probably overcompensated for their wage losses. Those tort claimants represented by lawyers usually receive greater recovery than claimants who do not. There is an unusually high inflation rate in bodily injury claims. There are some delays in the receipt of compensation on the tort side.

There are problems with the no fault side of the system. The minimal no fault benefits provided by the current system are no longer adequate to meet the needs of at fault claimants. As well, there are delays in the delivery of no fault benefits.

In comparison to other systems, Figure 20 shows that the current system scored highest on the criteria of deterrence and cost internalization, and lowest on compensation coverage and operational efficiency. It also scored poorly on the criterion of premium costs in comparison to alternate systems.

While the current system did not attain a desirable cumulative total score, it achieved two of the evaluative criteria better than any other model. On the other hand, its performance in the area of victim compensation and operational efficiency was the weakest of all models examined. Part of the low ranking under the criterion of victim coverage was because those victims who are partly or wholly at fault for their losses will have restricted rights of recovery under the tort feature of the system. If Albertans consider it proper that victims who are partly or wholly at fault bear the responsibility for their faulty conduct, then this criterion would have to be accorded less weight in evaluating the current system.

The ranking of the current system on the issue of premium costs must also be viewed with caution. If Albertans require their automobile insurance compensation system to restore victims as far as possible to their pre-accident state, by calculating complete compensation, including compensation for pain and suffering and loss of enjoyment of life, then premium levels must be higher than those achieved by models with no fault as their primary features. The data show that for the generous benefits provided by the tort component of the system, the premium levels have been very favourable indeed for the Alberta motorist. However, the data show that the no fault benefits are inadequate. In the Board's view there could be some modifications made to the compensation of minor injury claims and catastrophic injury claims to correct the respective problems of undercompensation and overcompensation. These modifications would produce greater equity among injured claimants and some reduction of claims costs. On the other hand, the Board is of the view that the no fault benefits must be increased. Change to these benefits would increase premium costs.

Moreover, the data show that currently, compulsory automobile insurance is underpriced. There is a pricing problem in the system at present, and the Board expects that the pricing problem will persist into the future without some measures to counteract it.

B. The desirability of implementing modest reforms to the current automobile insurance system to enhance its cost effectiveness

As indicated, there are at least two views on the resolution to the pricing problem. One view is that the problem can be resolved internally, by allowing premiums to increase to the level of loss costs. The other view is that the problem can be resolved externally, by changing the structure of the automobile insurance system. The Government must decide which of these views to accept or whether there is an acceptable combination of the two views.

Whatever view it chooses, the Board recommends the Government undertake a comprehensive traffic safety program to reduce frequency and severity of losses resulting from motor vehicle accidents. The Board is convinced that these measures would produce some reduction in claims costs. If the Government chooses also to modify the compensation side of the current system, then further choices must be made. The approach taken to implementing the proper choice can be as important as making the choice.

The Board emphasizes there is no one perfect automobile insurance system. Each model presumes certain compromises of benefits in order to assure more acceptable premium costs. From its own investigations, the Board found that threshold and pure no fault automobile insurance systems function effectively in practice. Administrators of the automobile insurance systems operating in Michigan and Quebec reported a high degree of consumer satisfaction. Industry representatives report favourable results from the new Ontario threshold system. However, each group admits that trade-offs were necessary and elimination of benefits did not meet with approval of all groups of consumers.

The Board favours the preservation of as many positive features of the current system as possible for several reasons. First, the transformation of an automobile insurance system is a significant undertaking. In the automobile insurance market, systemic changes can cause market dislocation and instability. These conditions have negative effects on both automobile insurance consumers and suppliers. Second, the overhaul of an automobile insurance system can be costly. Moreover, the costs may have to be borne ultimately by the automobile insurance consumers. Finally, the current system may not require radical changes to cure the present deficiencies. The Board recommends the Government considers reforms by proceeding along the spectrum shown in Figure 19 from the left to the right until it has achieved the combination of compensation features most suitable to Alberta motorists.

C. The cost savings and effectiveness of a no fault system for compensation for claims arising out of automobile accidents

Some commentators argue that members of society must reconsider the underlying premises of the tort system. Some say that the community as a whole should accept responsibility for traffic injury, irrespective of fault. They say that all traffic victims should receive something closer to full compensation for their economic and non-pecuniary damages. Thus, the primary feature of the system should be no fault compensation for all traffic injury victims.

The current system does have a no fault feature. The question is whether to improve the existing no fault component of the current scheme and maintain the tort component, or to limit or eliminate the tort feature entirely. Greater cost savings and cost effectiveness can be achieved by transformation to systems which are primarily no fault, but not without a sacrifice of certain compensation benefits now available under the current system.

The Board considers there should be further study of whether the system should widen the scope of traffic victims to be compensated as a matter of fairness rather than as a matter of attaining premium stability. The Government should determine if Albertans desire a system that is primarily fault based, or primarily based on the principle of no fault.

D. Whether there are reasonable grounds to support the proposition that modifications to the current system that enlarge no fault features would produce greater price stability in the short and long term

The Board is of the view that implementing certain tort reforms would produce greater price stability in the short term, that is, the next five years. The Board recommends modifications to the current system to enlarge the no fault features and the non-pecuniary tort benefit for the catastrophically injured, not for the goal of price stability, but because the benefits are inadequate. It further recommends some restrictions upon tort rights to correct for overcompensation in some instances as well as to contain claim costs. Reforms of each of the tort side and the no fault side of the system would affect the price of automobile insurance inversely. However, the Board is of the view that such reforms taken together would produce modest savings in loss costs. Further, if the premium levels were permitted to rise in the short term, the Board considers that these reforms taken together would produce price stability in the short term.

The Board thus proposes two options for reform to attain premium stability in the short term. Under the first option, ("Option 1"), there would be modest reforms to both the tort and the no fault features of the current system.

The first tort reform contemplated by Option 1 is a limitation upon the right of recovery for all non-pecuniary damage claims in the form of a deductible of $10,000. This means that the system would not compensate any claim for non-pecuniary general damages of a value of less than or equal to $10,000. Any non-pecuniary general damage claim above the value of $10,000 would be reduced by that amount.

The second tort reform is an extension of the Trilogy imposed limit of $100,000 set in 1978 (and indexed for inflation) for recovery of non-pecuniary general damages for those victims with catastrophic injuries to the level of $300,000 (and thereafter indexed for inflation). Although all claims for non-pecuniary general damages would be subject to the deductible, the increase of the previous ceiling of $225,000 (indexed to 1991 dollars) to $300,000 would provide some measure of horizontal equity for victims with catastrophic injuries. This increase is unlikely to result in a measurable increase in premium.

The Board recognizes that the effect of the introduction of a deductible feature is to eliminate altogether non-economic loss claims for claimants with minor injuries, and to reduce the recovery for claimants with serious injuries. At first sight, there may be strong resistance by the public to this reform. There is no doubt that such claimants have sustained losses which are currently recognized as compensable by monetary awards. However, claimants with catastrophic injuries have had a restriction upon their rights of recovery of non-pecuniary general damages since the decision of the Trilogy in 1978. Thus there is precedent for some restriction upon non-pecuniary general damages under the tort system. The Board recognizes that this reform has some critics. Some say that lawyers will weaken the effect of the deductible of $10,000 by attempts to win higher calculations of injury awards to pass the deductible limit. The Board suggests that this concern could be met by the creation of a panel of judges, physicians, experienced tort lawyers, consumers, and insurance company representatives to establish guidelines to determine what claims will fall below the $10,000 limit. Such guidelines could promote certainty and dissuade litigation in respect of the $10,000 floor level. The Board's consulting actuary estimates that the implementation of the deductible plan as above outlined will produce a saving of about $34-$40 per insured automobile.

The Board recommends implementation of Option 1 contemporaneously with other tort reforms such as legislation to enact mandatory structured settlements, adjustment of prejudgment interest rates for non-pecuniary general damages, and elimination of the collateral benefits rule. The Board expects some further modest savings through these reforms.

In exchange for the deductible limitation, there will be more realistic compensation for economic losses to all claimants irrespective of fault. Thus, Option 1 also provides for modest increases to the no fault benefits of the current system as follows:

a. increase of medical and rehabilitation benefits up to $25,000 per person

b. increase of death benefits
  - death of head of household - $10,000, plus $1,000 for each claimant beyond the first plus 1% of principal sum for 104 weeks
  - death of spouse - $10,000
  - death of dependant - $2,000

c. funeral benefits - $3,000 per person

d. income replacement - 75% of gross wages to a maximum of $500/week for 104 weeks

e. unpaid homemakers - $70 per week for 26 weeks if totally disabled.

These benefits should be subject to annual review or indexing.

With these increases to the no fault benefits, traffic victims with minor injuries would still see full recovery of their economic losses.

If delays in delivering benefits have been due to lack of diligence on the part of insurers, the Government could legislate time requirements in which insurers must make payment of no fault benefits as well as penalties for non compliance. If the problem originated with the comprehension of the application, simplification of the procedure should be investigated. The result would be reduced delays in compensation payments.

The Board recommends that the system provide no fault wage benefits on a secondary basis rather than contributory, as is the case at present. The system currently requires that all sources contribute proportionately to the victim's wage losses. The problem with contributory compensation is that it can result in overcompensation where other sources of income replacement are available and do not take contributory sources into account. The following examples illustrate the different effects depending whether the automobile policy no fault benefits are contributory, primary or secondary. They assume automobile no fault benefits and disability income benefits which pay 60% of gross weekly income are available.

Example 1 - Benefits are Contributory

Where income replacement is contributory with other sources, the no fault benefits under the automobile policy are paid proportionately with other sources of available income replacement.

For example, compensation for loss of gross income of $1,000 per week would be awardable as follows:

Primary disability benefits - 60% of $1,000	=	$600.00
Contributory no fault benefits - Gross income of $1,000 divided by the sum of benefits available from all sources $600 plus $500 = $1,100 multiplied by the no fault benefit of $500.[$1,000/($600 + $500)] x $500	=	$454.54
Total	=	$1,054.54

A net income replacement of $1,054 is overcompensation on a gross income of $1,000. The problem would become more critical after the level of no fault wage benefits were increased to a realistic levels of average wages currently earned in Alberta.

Example 2 - Benefits are Primary

Where income replacement is primary to other sources of available income replacement, the no fault benefits under the automobile policy are paid out before other sources of income replacement. Compensation for loss of gross income of $1,000 per week would be calculated as follows, where there are disability benefits and no fault benefits in place and the no fault benefits under the automobile policy are primary:

Primary - no fault benefits - 75% of $1,000 to $500 max,	=	$500.00
Secondary disability benefits - 60% of $1,000 = $600 less primary coverage of $500	=	$100.00
Total	=	$600.00

The compensation payable to the victim is in an amount equal to the amount otherwise payable under the disability policy, however, the automobile policy pays the major share of that sum.

Example 3 - Benefits are Secondary

Where the income replacement under the automobile policy is secondary to other sources of available income replacement, the automobile policy would pay only where benefits available from other sources did not total an amount equal to 75% of the gross weekly income. The compensation for loss of gross income of $1000 per week would be awardable as follows:

Primary disability benefits - 60% of $1,000	=	$600.00
Secondary - no fault befits - 75% of $1,000 $750 less primary of $600 to $500 max.	=	$150.00
Total	=	$750.00

The automobile policy pays $150 to bring income replacement up to an amount equal to $750 or 75% of gross income.

The Board's consulting actuary undertook cost estimates assuming firstly that the savings would be measured against the 1990 automobile insurance product and then assuming the savings in relation to the cost of the automobile insurance product in 1992. Costings in two periods indicate the savings to be expected by the time the proposals are implemented. They further illustrate the future prospect of price stability. The actuary reported the modest changes to the no fault benefits scheme contemplated under Option 1 would likely result in an saving of about $32 per automobile in relation to the 1990 product. The change to the no fault benefits taken together with the deductible plan should still produce a net saving of $37 per insured automobile for the 1992 product.

Assuming that the average loss cost per insured automobile exceeded the premium in 1990 by $54, the savings described above should bring the current premium costs more closely into line with current loss costs.

Assuming further some additional modest savings attainable through the implementation of the remaining tort reforms, and some additional modest premium increases are granted, the Board expects that the goal of price stability could be achieved in the short term.

The Board is of the view that these modest increases to the no fault benefit features of the current system and the elevation of the ceiling of non-pecuniary general damage awards for the victims with catastrophic injuries would ameliorate the problem of inadequate victim coverage. The Board considers that the tort reforms would reduce the administrative and transaction costs and delays. In turn, the tort reforms should strengthen the operational efficiency of the system. When the proposed increases to the no fault benefits are taken into account, the Board expects the effect of the reductions of compensation upon the injured victim to be muted. If the system eliminates certain non pecuniary general damages claims, the reform might expedite the delivery of no fault benefits in many bodily injury claims. In turn, there should be some containment of premium increases and improvement in the adequacy and timeliness of initiation of payments of no fault benefits. Moreover, if the goal is to ensure an adequate supply of automobile insurance at a price which Alberta motorists can afford, there must be some control of loss costs to control premium increases.

The Board concludes that if some adjustment is necessary to preserve the tort features of the system, the limitation proposed under Option 1 is the most modest adjustment possible in the circumstances. The Board sees Option 1 as a reasonable response to the criticisms that the current tort system overcompensates claimants with minor injuries, undercompensates claimants with the most serious injuries, and provides no fault benefits that are inadequate and delayed.

However, the Board is unable to determine whether Option 1 will ensure automobile insurance premium stability in the long term. The Board concludes that if further reforms to the current system are to be undertaken, the Government should consider the models next in sequence on the spectrum shown in Figure 19. The Board is of the view that further modifications to the current system which retain some tort component would be preferable. It agrees with the Osborne Report finding that a motor vehicle compensation system should deal humanely with the injured and provide reasonably generous rehabilitation and long-term care benefits on a no fault basis while preserving a compensation distinction between those who cause accidents and those who do not. It further agrees that the compensation deficiencies in the tort system could be accommodated by a soundly structured benefit package for persons injured in automobile accidents.

The Board thus recommends a second option ("Option 2") for consideration to solve the premium stability problem. Option 2 contemplates the implementation of an enhanced no fault benefits scheme with full tort rights subject to a deductible of $10,000 for all non-pecuniary general damage claims and other tort reforms included in Option 1 described above.

The no fault benefits package under Option 2 would consist of the following:

a. medical and rehabilitation	- up to $500,000 per person for 10 years or 20 years less the victim's age, whichever is the longer, such coverage to be secondary to other health care coverage.
b. long term care	- up to $500,000 per person
c. death benefits	- $25,000 for death of the head of the household or spouse plus $10,000 for each dependant - $10,000 for each dependant
d. funeral benefit	- $3,000 per person
e. income replacement	- 75% of gross wages to a maximum of $500 per week, with a 7 day waiting period for employed persons, and 60 day wait for the deemed to be employed, i.e., those persons who can prove that they had employment for 6 of the 12 months previous to the loss - students at the elementary school level to receive $1,000 per year lost; students at the secondary level to receive $2,000 per year; such claimants who attain age 19, and remain disabled and cannot attend school, receive $340 per week - students at college or university level to receive $4,000 per year lost; such claimants after date otherwise expected to graduate, still disabled, receive $340 per week. - $200 per week for child care plus $50 per child or dependant to a maximum of $350 per week - $50 per week for home care based on reasonable expenses.

These benefits should be subject to annual review or indexing.

The Board's actuary also provided costing estimates for Option 2. The costings further consider whether the income replacement benefits are primary, i.e. payable firstly and entirely by the automobile insurance no fault benefits, or secondary, i.e. payable secondly to all disability and wage benefits from any other existing sources. As indicated, the current system is contributory, and thus provides that the victim receives disability and income benefits proportionately from both automobile and other insurance sources. The estimated costs of Option 2 vary strongly depending whether the no fault benefits are primary or secondary to any other insurance schemes in place in favour of the victim. In addition to determining the cost of the insurance product assuming the benefits were primary or secondary, costings were based on 1990 prices and then projected for the price of the product in 1992.

If the Option 2 were implemented with the benefits to be primary, the savings in relation to the 1990 product are estimated at $24 per automobile. If the benefits were secondary, the savings to the 1990 product are estimated at $27 per automobile.

If Option 2 were implemented with primary benefits, the estimated savings on the 1992 product would be $29. Option 2 with secondary benefits would produce a savings of $32 on the 1992 product.

The advantages of Option 2 include the preservation of the right to sue for losses not covered by the no fault benefits, greater coverage for all traffic injury victims regardless of fault, and likely more rapid delivery of benefits. Option 2 remedies the problem of inadequate victim coverage to a greater degree than Option 1. The more generous no fault benefits should reduce the administrative costs and transaction delays more effectively than Option 1. However, the deterrent and accident prevention goals might be diminished in some modest degree under Option 2.

The cost savings under Option 2 are lower in most cases than the cost savings expected under Option 1. The reason is that the no fault benefits package under Option 2 is considerably more generous than is the package under Option 1. The benefits under Option 2 are more comparable to the benefits currently available in Ontario and Quebec than are the benefits under Option 1. The Board prefers Option 2. Although the cost savings are lower under Option 2 than is the case under Option 1, the benefits are more in line with the benefits currently offered to traffic injury victims on Ontario and Quebec and the needs of Albertans in 1991-2. Moreover, the Board is of the view that Option 2 is more likely to curtail the inflationary effect of claims costs over time. Because of the enhanced no fault benefits and the deductible plan, the Board expects that litigation would be reduced. As a result, the Board concludes that although Option 1 may provide greater cost savings in the short term, Option 2 may well prove to be a satisfactory solution to the problem of premium stability not only in the short term but also in the long term.

The Board recommends that the Government implement either of Option 1 or 2 in the short term if it decides that the problem of premium stability in automobile insurance must be solved by some method of cost containment. It should further study the solution for premium stability in the long term. As indicated, Option 2 may well prove to be a satisfactory solution to the problem in the long term.

The Board proposes a further option ("Option 3") for consideration of the premium stability problem in the long term. Option 3 contemplates implementation of a threshold no fault system with the previously described enhanced no fault benefits package.

The difference between Option 2 and Option 3 is that under Option 2, tort rights are fully preserved apart from the limitation of the $10,000 deductible upon all non pecuniary general damage claims. Under Option 3, tort rights are intended to be restricted to only the most serious injury claims. It would be necessary to consider whether a threshold system in Alberta should have a monetary or verbal limit. If it were a verbal limit, it must be determined whether it would be the same or similar to the limit under the Michigan or Ontario model. Option 3 in this report assumes the threshold is the same as that currently in place in Ontario.[123]

Option 3 could reduce the effectiveness of deterrence and accident prevention. This reduction would weaken the goal of cost internalization. However, it would likely achieve the greater operational efficiency and attain lower premium costs than Option 1 or 2. It would improve victim coverage more substantially than Option 1 but less substantially than Option 2. It is the severe restriction of tort rights under this model than requires further careful study of whether Albertans are prepared to give up these benefits in exchange for the other goals to be achieved by their automobile insurance system.

The Board's actuary undertook costings of Option 3 assuming the benefits were either primary or secondary, and then assuming the cost of the product in 1990 and 1992. If Option 3 were implemented and the benefits were primary, the cost savings on the 1990 product are estimated to be $65 per automobile. If Option 3 were implemented and the benefits were secondary, the estimated savings on the 1990 product would be $72. If Option 3 were implemented and the benefits were primary, the savings to the 1992 product are estimated at $77. If Option 3 were implemented and the benefits were secondary, the savings to the 1992 product are estimated in the amount of $85.

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[123] see page 88 supra.

The estimates show that the cost savings are the highest under Option 3, the threshold model. Thus, Option 3 has the greater potential for premium savings. The Board is of the view that for the achievement of price stability in the long term, either Option 2 or Option 3 would be suitable.

As indicated, the Board did not obtain cost estimates of a pure no fault model. The Board is satisfied that the cost savings would be higher under a pure no fault model similar to that in place in Quebec at present than would be attainable under any of the three options described above. The Board further assumes that a pure no fault model would provide the highest degree of operational efficiency of all models. However, to attain these goals, it might sacrifice the goals of deterrence and cost internalization. Moreover, tort benefits would be severely reduced from the level Albertans currently enjoy.

The Board concludes that the pricing problem in the long term would be adequately met by the implementation of either Option 2 or Option 3. While the Board observes that the premium savings would be greater under the pure no fault model, Options 1, 2 or 3 would preserve the principle of individual responsibility for fault in certain cases, a social concept which cannot be quantified in dollar terms. The pure no fault model should not be considered for implementation unless and until the Government is satisfied that Alberta motorists favour the compromise of benefits required by this model. The Board takes the view that if the Government determines that the goal of attaining premium stability requires modification of the automobile insurance system to achieve cost containment, then it should consider which of the models shown on the spectrum in Figure 19 will achieve the combination of compensation features most suitable to Alberta motorists.

NO FAULT AUTOMOBILE INSURANCE BENEFITS SUMMARY

		Basic	
	Type of Coverage/Administration	**Income Replacement**	**Medical and**
Alberta[1]	▸ limited no fault accident benefit insurance ▸ privately run\compulsory ▸ no restriction on tort litigation in excess of no fault benefits ▸ plan in effect since 1972 with amendments	▸ 80% of gross wages to a maximum of $150/week for 104 weeks for temporary or total disability ▸ 7 day waiting period ▸ unpaid homemaker $50/week for 26 weeks if totally disabled ▸ benefits not indexed ▸ collateral benefits - first payers taken into consideration in calculation of no fault benefits, e.g. any government or employer-paid income continuance	▸ up to $5,000 per rehabilitation ▸ coverage in exc health insurance ▸ time limit 2 years accident
Ontario[2]	▸ threshold no fault accident benefit insurance ▸ privately run/compulsory ▸ tort litigation beyond no fault subject to threshold (A) death, or (B) permanent serious disfigurement, or (C) permanent serious impairment of an important bodily function, caused by continuing injury which is physical in nature	▸ 80% of gross wages to maximum of $600/week ▸ temporary disability payable for 3 years/permanent disability for life ▸ minimum payment $185/week, even if not employed ▸ child care $50/week/child to maximum of $200/week if insured employed/unemployed and receiving weekly no fault benefits ▸ benefits not indexed ▸ students, retirees, homemakers and unemployed $185/week ▸ collateral benefits - first payers taken into consideration in calculation of no fault benefits, e.g. workers' compensation, any government or employer-paid sick leave or income continuance, U.I.C. excluded	▸ up to $500,000 fo rehabilitation per year time limit of victim's age ▸ up to $1,500/mon long-term care to additional $500,0
Michigan[3]	▸ threshold no fault accident insurance ▸ privately run/compulsory ▸ tort litigation beyond no fault subject to threshold: death, serious impairment of body function, or permanent serious disfigurement ▸ right to sue for additional economic loss above no fault not subject to threshold ▸ plan in effect since 1973 with amendments	▸ up to 85% of lost wages to maximum of $2,939 U.S./month including $20 U.S./day for substitute services ▸ payable for maximum 3 years for temporary or permanent disability ▸ benefits indexed to annual cost of living ▸ collateral benefits - first payers taken into consideration in calculation of no fault benefits, e.g. state, federal, workers' compensation benefits or insured designated collateral source	▸ no monetary limi ▸ includes rehabilit

Exhibit 1

Basic No Fault Benefits

e Replacement	Medical and Rehabilitation	Death Benefits	Non-Economic Loss
es to a maximum of $150/week temporary or total disability od r $50/week for 26 weeks if ed - first payers taken into alculation of no fault benefits, nt or employer-paid income	▸ up to $5,000 per person including rehabilitation ▸ coverage in excess of government health insurance plans ▸ time limit 2 years from date of accident	▸ death anytime after accident ▸ death of head of household $5,000 plus $1,000 for each dependent beyond first + 1% of total principal sum for 104 weeks - no limit ▸ death of spouse $5,000 ▸ death of dependent - scale by age - maximum $1,500 ▸ lump sum funeral expenses up to $1,000 per person	▸ no benefits provided ▸ subject to right of tort litigation
es to maximum of $600/week y payable for 3 isability for life $185/week, even if not k/child to maximum of ed employed/unemployed and o fault benefits d homemakers and unemployed first payers taken into lculation of no fault benefits, pensation, any government or leave or income continuance,	▸ up to $500,000 for medical and rehabilitation per person with 10 year time limit of 20 years less victim's age ▸ up to $1,500/month/person for long-term care to maximum of an additional $500,000	▸ death of head of household (an insured person) - $25,000 to first survivor ▸ death of spouse - $25,000 to first survivor ▸ $10,000 to each additional surviving dependent ▸ $10,000 if deceased was a dependent ▸ death that ensues within 180 days of accident or within 3 years subject to evidence of continuous disability during period ▸ lump sum funeral expenses up to $3,000 per insured person	▸ no benefits provided ▸ right of tort litigation subject to threshold determination
vages to maximum of $2,939 ng $20 U.S./day for substitute um 3 years for temporary or y annual cost of living first payers taken into lculation of no fault benefits, workers' compensation benefits ted collateral source	▸ no monetary limit ▸ includes rehabilitation	▸ up to maximum of $2,939 U.S./month ▸ payable for maximum 3 year period ▸ lump sum funeral expenses minimum $1,750 U.S. to maximum $5,000 U.S. ▸ benefits indexed to annual cost of living, effective October 1 each year	▸ no benefits provided ▸ right to tort litigation subject to threshold determination

	Type of Coverage/Administration	Income Replacement	Medical an
Quebec[4]	▸ pure no fault accident benefits ▸ publicly run (government)/compulsory ▸ no right to tort litigation ▸ plan in effect since 1978 with amendments	▸ 90% of net income subject to the minimum wage standard to a maximum of $40,000 gross annual income ▸ indexed to annual Industrial Composite in Quebec ▸ collatoral benefits - other sources of income considered in calculation of benefits ▸ loss of schooling: - $3,000/year lost at elementary level; $5,500/year lost at secondary level; $5,500/semester at post-secondary to maximum $11,000/year ▸ if unable to resume studies or hold employment after date of scheduled completion, income replacement is based on average earnings according to Industrial Composite in Quebec, currently $24,099 ▸ person not employed full time and for no remuneration has care of children or other incapacitated person is entitled to indemnity while unable to provide care ranging from$250/week for care of one person to $340/week for four or more ▸ person responsible for care of others, as above, is entitled to reimbursement of expenses incurred while unable to provide care from $75/week for care of one person to $150/week for four or more. ▸ loss of unpaid worker to family business up to $500/week	▸ no mon rehabilit ▸ reimbur subject ▸ rehabilit approve
Enhanced No Fault[5]	▸ enhanced no fault benefit coverage ▸ privately run/compulsory ▸ no restriction tort litigation in excess of no fault benefits	▸ 80% of gross income to a maximum of $450/week for duration of disability ▸ 7 day waiting period ▸ collateral benefits - secondary to other sources of income except U.I.C. ▸ deemed employed having worked 6 out of last 12 months-as above with 60 day waiting period ▸ loss of schooling: - $1,000/year lost at elementary level; $2,000/year lost at secondary level; $4,000/year lost at college/university level - $340/week at age 19 if still disabled and not attending school or no longer entitled to loss of college/university year benefits ▸ household care expenses incurred to $50/week ▸ child care - $200/week plus $50 per dependent child to maximum of $350/week without proof of expenses for 2 weeks and as proven thereafter	▸ up to $5 medical expense ▸ coverag governm plans ▸ time limi 20 years ▸ long ter

Footnotes:

1. Prince Edward Island, Nova Scotia, New Brunswick and North West Territories have distinct but similar plans with variable dollar values for the basic no fault benefits. Accident benefits coverage not compulsory in Newfoundland.
2. Threshold no fault plan effected June 1, 1990.
3. Michigan income replacement and death benefit amounts of $2,939 U.S./month are separate and mutually exclusive.
4. Pain
5. Prop
year
amou

e Replacement	Medical and Rehabilitation	Death Benefits	Non-Economic Loss
% of net income subject to the minimum wage standard to a ximum of $40,000 gross annual income lexed to annual Industrial Composite in Quebec lateral benefits - other sources of income considered in culation of benefits s of schooling: - $3,000/year lost at elementary level; $5,500/year lost at secondary level; $5,500/semester at post-secondary to maximum $11,000/year nable to resume studies or hold employment after date of heduled completion, income replacement is based on erage earnings according to Industrial Composite in ebec, currently $24,099 rson not employed full time and for no remuneration has re of children or other incapacitated person is entitled to demnity while unable to provide care ranging from$250/week care of one person to $340/week for four or more rson responsible for care of others, as above, is entitled to mbursement of expenses incurred while unable to provide re from $75/week for care of one person to $150/week for r or more. s of unpaid worker to family business up to $500/week	▸ no monetary limit for medical or rehabilitation coverage ▸ reimbursement of expenses subject to approval by Régie ▸ rehabilitation program must be approved by Régie	▸ spouse of deceased entitled to $40,000 to $200,000 based on age and income factors ▸ dependent of deceased other than spouse entitled to $19,000 to $35,000 based on age plus $16,500 if dependent disabled at date of death of victim ▸ parents of deceased victim without dependents entitled to $15,000 ▸ lump sum funeral expenses up to $3,000 per person	▸ current maximum payment $100,000; covers disfigurement, pain, suffering, loss of enjoyment of life ▸ no right to sue ▸ benefits indexed to annual Consumer Price Index
% of gross income to a maximum of $450/week for duration disability day waiting period lateral benefits - secondary to other sources of income cept U.I.C. emed employed having worked 6 out of last 12 months-as ove with 60 day waiting period s of schooling: - $1,000/year lost at elementary level; $2,000/year lost at secondary level; $4,000/year lost at college/university level - $340/week at age 19 if still disabled and not attending school or no longer entitled to loss of college/university year benefits usehold care expenses incurred to $50/week ild care - $200/week plus $50 per dependent child to ximum of $350/week without proof of expenses for 2 weeks d as proven thereafter	▸ up to $500,000 per person medical and rehabilitation expenses ▸ coverage in excess of government health insurance plans ▸ time limit longer of 10 years or 20 years less victim's age ▸ long term care up to $500,000	▸ death of head of household or spouse $25,000 plus $10,000 for each dependent ▸ death of dependent child $10,000 ▸ lump sum funeral expenses up to $3,000 per person	▸ no benefits provided ▸ subject to right of tort litigation

have distinct but similar plans with variable dollar values for foundland.

h are separate and mutually exclusive.

4. Pain and suffering benefits to $125,000 in 1992 and indexed thereafter.
5. Proposal from Osborne Report (1988). All benefits except death benefits, to be indexed once a year to annual Consumer Price Index, subject to a maximum of twice the stipulated original benefit amount.

NO FAULT AUTOMOBILE INSURANCE BENEFITS SUMMARY

		Basic No	
	Type of Coverage/Administration	**Income Replacement**	**Medical an**
Option 1	▸ limited no fault accident benefit insurance ▸ privately run/compulsory ▸ no restriction on tort litigation in excess of no fault benefits	▸ 75% of gross wages to a maximum of $500/week for 104 weeks for temporary or total disability ▸ 7 day waiting period ▸ unpaid homemaker $70/week for 26 weeks if totally disabled ▸ benefits not indexed ▸ collateral benefits - first payers taken into consideration in calculation of no fault benefits, e.g. any government or employer-paid income continuance	▸ up to $25,0 including r ▸ coverage in government plans ▸ time limit 2 accident
Option 2	▸ enhanced no fault benefit coverage ▸ privately run/compulsory ▸ no restriction tort litigation in excess of no fault benefits	▸ 75% of gross income to a maximum of $500/week for duration of disability ▸ 7 day waiting period ▸ collateral benefits - secondary to other sources of income except U.I.C. ▸ deemed employed having worked 6 out of last 12 months-as above with 60 day waiting period ▸ loss of schooling: - $1,000/year lost at elementary level; $2,000/year lost at secondary level; $4,000/year lost at college/university level - $340/week at age 19 if still disabled and not attending school or no longer entitled to loss of college/university year benefits ▸ household care expenses incurred to $50/week ▸ child care - $200/week plus $50 per dependent child to maximum of $350/week without proof of expenses for 2 weeks and as proven thereafter	▸ up to $500, medical an expenses ▸ coverage in government plans ▸ time limit lo 20 years le ▸ long term c
Option 3	▸ threshold no fault accident benefit insurance ▸ privately run/compulsory ▸ tort litigation beyond no fault subject to threshold (A) death, or (B) permanent serious disfigurement, or (C) permanent serious impairment of an important bodily function, caused by continuing injury which is physical in nature	▸ 75% of gross income to a maximum of $500/week for duration of disability ▸ 7 day waiting period ▸ collateral benefits - secondary to other sources of income except U.I.C. ▸ deemed employed having worked 6 out of last 12 months-as above with 60 day waiting period ▸ loss of schooling: - $1,000/year lost at elementary level; $2,000/year lost at secondary level; $4,000/year lost at college/university level - $340/week at age 19 if still disabled and not attending school or no longer entitled to loss of college/university year benefits ▸ household care expenses incurred to $50/week ▸ child care - $200/week plus $50 per dependent child to maximum of $350/week without proof of expenses for 2 weeks and as proven thereafter	▸ up to $500, medical an expenses ▸ coverage i governmen plans ▸ time limit l 20 years le ▸ long term

Exhibit 2

Basic No Fault Benefits

e Replacement	Medical and Rehabilitation	Death Benefits	Non-Economic Loss
ximum of $500/week for 104 weeks for k for 26 weeks if totally disabled ers taken into consideration in its, e.g. any government or employer-	▸ up to $25,000 per person including rehabilitation ▸ coverage in excess of government health insurance plans ▸ time limit 2 years from date of accident	▸ death anytime after accident ▸ death of head of household $10,000 plus $1,000 for each dependent beyond first + 1% of total principal sum for 104 weeks - no limit ▸ death of spouse $10,000 ▸ death of dependent - $2,000 ▸ lump sum funeral expenses up to $3,000 per person	▸ no benefits provided ▸ subject to right of tort litigation
aximum of $500/week for duration of ry to other sources of income except vorked 6 out of last 12 months-as above mentary level; $2,000/year lost at 0/year lost at college/university level still disabled and not attending school loss of college/university year benefits curred to $50/week $50 per dependent child to maximum of xpenses for 2 weeks and as proven	▸ up to $500,000 per person medical and rehabilitation expenses ▸ coverage in excess of government health insurance plans ▸ time limit longer of 10 years or 20 years less victim's age ▸ long term care up to $500,000	▸ death of head of household or spouse $25,000 plus $10,000 for each dependent ▸ death of dependent child $10,000 ▸ lump sum funeral expenses up to $3,000 per person	▸ no benefits provided ▸ subject to right of tort litigation
aximum of $500/week for duration of ry to other sources of income except vorked 6 out of last 12 months-as above mentary level; $2,000/year lost at 0/year lost at college/university level still disabled and not attending school loss of college/university year benefits curred to $50/week $50 per dependent child to maximum of xpenses for 2 weeks and as proven	▸ up to $500,000 per person medical and rehabilitation expenses ▸ coverage in excess of government health insurance plans ▸ time limit longer of 10 years or 20 years less victim's age ▸ long term care up to $500,000	▸ death of head of household or spouse $25,000 plus $10,000 for each dependent ▸ death of dependent child $10,000 ▸ lump sum funeral expenses up to $3,000 per person	▸ no benefits provided ▸ right of tort litigation subject to threshold determination

Volume

2

A STUDY OF PREMIUM STABILITY

IN COMPULSORY AUTOMOBILE INSURANCE

BY THE ALBERTA AUTOMOBILE INSURANCE BOARD
FOR THE MINISTER OF CONSUMER AND CORPORATE AFFAIRS
OF THE GOVERNMENT OF ALBERTA

Volume 2

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FOR THE MINISTER OF CONSUMER AND CORPORATE AFFAIRS

OF THE GOVERNMENT OF ALBERTA

SEPTEMBER 1991

Volume 2

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LIST OF PARTICIPANTS IN CLAIM SURVEY

Alberta Motor Association Insurance Company
Allstate Insurance Company
Canada West Insurance Company
Continental Insurance Management Limited
Co-operators General Insurance Company
Dominion of Canada Group
General Accident Assurance Company of Canada
Guardian Insurance Company of Canada
Peace Hills General Insurance Company
Portage La Prairie Mutual Insurance Company
Prudential Assurance Company Limited
Royal Insurance Company of Canada
State Farm Mutual Automobile Insurance Company
Wawanesa Mutual Insurance Company
Wellington Insurance Company
Western Union Insurance Company
Zurich Canada

APPENDIX 2

REPORT ON
ALBERTA MOTOR VEHICLE
CLAIM SURVEY

Prepared by:

Joe S. Cheng, F.C.A.S., F.C.I.A.

27 August 1991

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Accident Benefits Claim Survey Questionnaire (pink form)

Summarized Results from A.B. Survey

OBJECTIVE

We have been retained by the Alberta Automobile Insurance Board to conduct two surveys of Alberta automobile insurance claims.

The purpose of these two surveys was to determine who was compensated, how much compensation was paid, the breakdown of compensation paid through first and third party automobile insurance, and from what sources the compensation was derived. The surveys were also designed to identify the transaction costs and the timeliness of the automobile insurance payments. The claims surveys were designed to:

1. Distribute the liability claims paid into their major components in order to determine what was paid for specific kinds of compensation including:
    - (a) pre-judgement interest,
    - (b) gross up for income tax,
    - (c) past income loss,
    - (d) future income loss,
    - (e) nonpecuniary loss,
    - (f) party and party cost,
    - (g) future care cost,

    and to distribute the accident benefits claim dollars by benefit type.

2. Compile a profile of both accidents (type of accident and degree of fault) and the injured making first or third party claims (social, economic characteristics of claimant, type and extent of injuries, degree of fault of claimants in accident and estimates of actual losses).

3. Collect information concerning processing of the claims. This includes information on the timeliness of payment and settlement, the use of counsel and the courts, and the amount of payments made and the transaction cost involved.

4. Collect information on the sources and the amount of compensation received by those who are injured in motor vehicle accidents.

5. Estimate the annual inflation rate of liability claims.

To deal with these issues, we designed and conducted two surveys: one involving bodily injury claims and the other involving accident benefits claims.

METHODOLOGY

Standard statistical sampling techniques were used. In total, 1,340 bodily injury survey forms and 1,260 accident benefit survey forms were submitted. Past experience in another similar study showed that this sample size is sufficient to reproduce a reasonable representation of automobile insurance claimants in Alberta.

To ensure that the sample will accurately reflect geographical distribution of claims across the province and the mix of vehicle types, two controls were placed on the random sampling process. The confidential claims information of 23 automobile insurance companies were provided by the Insurance Bureau of Canada for our review. From these 23 companies, an appropriate number was chosen (18 for both bodily injury and accident benefits surveys) so that the resulting sample would exhibit a claims distribution by region similar to that of the entire industry. Each sample included two direct writing companies because differences in distribution systems were considered to be significant. To ensure that the result of the surveys will have credible data for vehicles other than private passenger cars, we drew the claims from two strata: private passenger cars and others (which included commercial vehicles, taxis, and motorcycles). Unfortunately, not all the claims from the "others" category were returned. Therefore, the results for the non-private passenger cars were not as reliable as the private passenger cars.

BODILY INJURY LIABILITY CLAIMS SURVEY

The 18 insurers were asked to submit, in either magnetic form or hard copy, complete lists of Alberta automobile bodily injury claims settled in 1988 and 1990. To eliminate the uncertainty arising from the adequacy of reserves, only closed liability claims were used. The number of claims required from each company were struck to reflect the geographic distribution and differences in marketing methods. The required number of claims were randomly selected from the lists. The companies were given claim identification numbers and instructions to complete the survey forms.

As an internal check, the summarized results of non-economic indicators for settlements in 1988 were compared against settlements in 1990. No material difference was noted. We concluded that the sample was sufficiently reliable for the study.

In addition, two specific external checks corroborated the results of the survey.

The first check was a gross weekly wage comparison. The average gross weekly wage (trended from the accident date to the settlement date @ 5.0% p.a.) for liability claimants in the survey were $458 and $503 for 1988 and 1990 respectively. The weekly average industrial wage in Alberta in 1988 and 1990 were $462.76 and $518.60 respectively. Thus, the liability claimants in the bodily injury claims survey were representative of the provincial average.

The second check was an age distribution comparison of bodily injury claimants with licensed drivers and drivers involved in accidents data. The percentage of liability claimants in each group corresponds closely with the external data.

Age	Licensed Drivers* %	Drivers involved in accidents** %	Liability Claimants %
Under 16	1.5	1.9	4.1
16 - 24	17.9	29.7	17.1
25 - 34	29.7	28.3	31.9
35 - 44	22.2	17.3	19.7
45 - 54	12.7	9.2	12.9
55 - 64	9.0	6.2	7.7
65 & over	7.0	4.9	6.6
Unspecified source	-	2.5	-

* Alberta Traffic Collision Statistics 1989, Table 4.1

** Alberta Solicitor General -- Motor Vehicles Division,
Operator Statistics, 31 December 1989

ACCIDENT BENEFITS CLAIMS SURVEY

The 18 insurers were asked to submit, in either magnetic form or hard copy, complete lists of Alberta automobile accident benefits claims settled in either 1988 and 1990. To eliminate the uncertainty arising from the adequacy of reserves, only closed accident benefits claims were used. The number of claims required from each company were struck to reflect the geographic distribution and differences in marketing methods. The required number of claims were randomly selected from the lists. The companies were given claim identification numbers and instructions to complete the survey forms.

As an internal check, the summarized results of non-economic indicators for settlements in 1988 were compared against settlements in 1990. No marked difference was noted. We concluded that the sample size was sufficiently reliable for the study.

In addition, two specific external checks corroborated the results of the survey.

The first check was a gross weekly wage comparison. The average gross weekly wage (trended from the accident date to the settlement date @ 5.0% p.a.) for accident benefits claimants in the survey were $431 and $483 for 1988 and 1990 respectively. The weekly average industrial wage in Alberta in 1988 and 1990 were $462.76 and $518.60 respectively. Thus, the accident benefits claimants considered in the survey were not representative of the provincial average; they were consistently about 7% lower. This was to be expected since most high wage earners received compensation from other sources such as employer sponsored health insurance programs and may not appear as accident benefits claimants.

The second check was an age distribution comparison of accident benefits claimants with licensed drivers and drivers involved in accidents data. The percentage of accident benefits claimants in each age group corresponds closely with the external data.

Age	Licensed Drivers* %	Drivers involved in accidents** %	Accident Benefit Claimants %
Under 16	1.5	1.9	3.7
16-24	17.9	29.7	16.9
25 - 34	29.7	28.3	30.7
35 - 44	22.2	17.3	22.9
45 - 54	12.7	9.2	13.6
55 - 64	9.0	6.2	6.7
65 & over	7.0	4.9	5.5
Unspecified source	-	2.5	-

* Alberta Traffic Collision Statistics 1989, Table 4.1

** Alberta Solicitor General -- Motor Vehicles Division,
Operator Statistics, 31 December 1989

DEFINITIONS

Note:

Throughout the report, two terms have specific meaning in an insurance context and the following should be noted:

Claim.

A claim is a file in which one or more claimants have received payments from the insurance company reporting the data. A claim can be for first party coverage or third party liability coverage.

An insurance company participating in both surveys may report a third party liability claim and a first party accident-benefit claim arising from the same accident, if both claims were in our respective samples.

Claimant.

A claimant is a person who has received payment from the insurance company reporting the data. A person who makes a claim, but does not receive payment, is not considered a claimant in this survey.

These definitions may not be the same as those used by the insurance companies.

The Insurance Bureau of Canada defines a claim differently in its statistical plan. It does not define claimant.

FINDINGS

While the claims surveys covered all vehicle types, our findings addressed only private passenger cars.

1. **Who were being compensated by the automobile insurance system.** From the surveys, we found that about two-thirds of the claimants are employed at the time of the accident. The breakdown of the claimants are as follows:

	Liability	Accident Benefits
Employed full time	56.4%	59.5%
Employed part time	7.6	5.5
Student - 16 & over	7.0	5.6
Retired	4.9	3.9
Unemployed	6.7	6.2
Homemaker	5.9	7.5
Preschooler	5.6	3.8
Other	5.9	8.0
	100.0	100.0

Roughly two-thirds of the injured persons were not at-fault since only the driver of the at-fault vehicle was responsible for the accident. Passengers or pedestrians were usually not at-fault parties.

Over half of the claimants had soft tissue injuries, and they had 25% of the claim amount. About 10% of the claimants had injuries which were of a permanent nature, but about 3% of the claimants had permanent and total disability.

2. **What were the damages compensated for by the automobile insurance system?** The automobile insurance system compensated personal injuries differently dependent on the degree of fault of the injured party. All insured persons were covered by some form of accident benefits regardless of fault.

When another insured party is partly (or wholly) responsible for the accident, the injured person can obtain tort benefits through the third party's insurer in addition to accident benefits from his own insurer. In 1990, we found that compensation was made under the following heads of damages.

Head of damage	Liability	Claims under $10,000	Claims Between $10,0001 & 75,000	Claims over $75,000
Past employment income	14.6%	7.6%	21.4%	11.0%
Out-of-pocket expense	5.8%	3.7%	6.3%	6.4%
Future employment income	18.6%	0.2%	3.4%	45.1%
Future care	3.3%	0.2%	0.7%	7.8%
Non-pecuniary	47.7%	83.1%	57.1%	18.2%
Gross up for tax		0.8%	0.0%	0.0%2.0%
Fund management	0.2%	0.0%	0.0%	0.6%
Party & party cost	5.2%	4.0%	6.5%	4.5%
Prejudgment interest	3.9%	1.2%	4.7%	4.5%
	100.1%	100.0%	100.1%	100.1%

Records with legal counsel but no party and party cost were adjusted by reducing the corresponding non-pecuniary loss amount. As a result, the percentage of claims amount payable under party and party cost was 5.2% versus 2.8% in the raw data.

For accident benefits, we found that compensation was made under the following types of benefit in 1990:

Benefit Type	Accident Benefits
Medical	35.3%
Long term care	0.5%
Chiropractor	1.8%
Rehabilitation	1.3%
Funeral	2.7%
Death -- principal sum	8.4%
Death -- survivor benefit	7.2%
Disability -- self	40.0%
Disability -- spousal	0.7%
Other	2.1%
	100.0%

3. **Where were the compensation dollars from?** For claimants eligible for tort benefits, they would receive an average of $15,842 from the following sources:

Source	Amount	% of total
Liability insurer	$ 14,645	92.5
Own auto insurer	978	6.2
Employer	197	1.2
U.I.C.	20	0.1
Personal A&S insurance	2	0.0
	$ 15,842	100.0

Accident benefits are paid irrespective of fault; claimants with non-permanent injuries, permanent injuries, and fatalities received on average, about $3,096, $29,824, and $7,979, respectively. By source of compensation, we have:

Non-Permanent Injuries

Source	Amount	% of total
Own auto insurer	2,319	74.9
Employer	684	22.1
U.I.C.	68	2.2
Personal A&S ins.	25	.8
Total	3,096	100.0

Permanent Injuries

Source	Amount	% of total
Own auto insurer	10,605	35.6
Employer	15,406	51.7
U.I.C.	483	1.6
Personal A&S ins.	3,329	11.2
Total	29,824	100.0

Fatalities

Source	Amount	% of total
Own auto insurer:		
Funeral	986	12.4
Death - Principal Sum	3,749	47.0
Death - Survivor Benefit	3,244	40.7
Total	7,979	100.0

4. **Adequacy of the compensation dollars.** A person with non-permanent disability eligible for tort benefits received $15,842 on average in 1988-1990. His wage loss was about $6,991 and he had about $1,130 out-of-pocket expenses which were fully reimbursed. Therefore, he received $14,712 (15,842 - 1,130) for his pain and suffering, and wage loss.

The following illustrates the level of benefits:

(1)	wage loss	$ 6,991	100.0%
(2)	tort income replacement	4,152	59.4%
(3)	acc. benefit - income replacement	823	11.8%
(4)	U.I.C.	20	0.3%
(5)	Employer	197	2.8%
(6)	Personal A&S ins.	2	0.0%
(7)	Total income replacement (2) to (6)	5,194	74.3%
(8)	Other tort benefits	9,503	135.9%
(9)	Other acc. benefits	15	0.2%
(10)	All benefits (excl. medical)	14,712	210.4%

In comparison, if the above individual was 32 and suffered a permanent and total disability, he would receive $43,878 for income replacement and an additional $7,854 for medical and out-of-pocket expenses. The following illustrates the level of benefits:

Tort Income Replacement	$7,585
Accident Benefits Income Replacement	$3,191
U.I.C.	$0
Employer	$2,055
Personal	$0
Total Income Replacement	$12,831
Other Tort Benefits (Excluding Medical)	$31,047
Other Accident Benefits (Excluding Medical)	$0
Total Compensation	$43,878
Total Medical	$7,819
Accident Benefits Medical	$35
Average Age	32

Finally, in the case of fatality, the estate would receive about $111,443.

Tort Income Replacement	$1,179
Accident Benefits	
Income Replacement	$0
U.I.C.	$0
Employer	$0
Personal	$0
Total Income Replacement	$1,179
Other Tort Benefits (Excluding Medical)	$100,582
Other Accident Benefits (Excluding Medical)	$8,214
Total Compensation	$109,975
Total Medical	$1,438
Accident Benefits Medical	$30
Average Age	36

On average, claimants receive the following from accident benefits depending on the type of injury:

Type of injury	Compensation	Wage Loss	% of wage loss
Non-permanent	$ 3,096	$7,760	39.9
Permanent	29,824	n/a	n/a
Fatality	7,979	n/a	n/a

5. **When were automobile insurance claim dollars paid?** Due to the nature of liability claims, delay in final payment was to be expected. The median claim was usually settled in 18 months. As many as 12% were still pending 36 months after the accident.

Accident benefits are paid regardless of fault. In 1990, approximately 20% of the claimants received a cheque within 4 weeks of the accident and about a third of the claimants had to wait more than 4 months from the date of the accident. 83% of the accident benefits claims were reported within a week of the accident, but the median claimant took over 4 weeks to submit an application for benefits. Once an application has been received, 50% of the claimants would receive a cheque within a week, 22% of the claimants would receive a cheque in more than a week but within 4 weeks while 28% had to wait for more than 4 weeks to get their first cheque.

It appears that the majority of the delay in accident benefits payment lies in the tardiness of application for benefits. In order to expedite accident benefit payments, the application for benefits must be simplified and the process streamlined.

6. **Transaction costs for liability claims.** The total transaction cost divided by the number of claimants worked out to $1,339 per claimant. It was about 13% of the total liability payments. The breakdown of these transaction costs are:

Category	Amount	% of transaction cost
Outside legal defense	$ 785	58.6
In-house legal defense	35	2.6
Indep. adjuster	327	24.4
Medical/expert fee	163	12.2
Other	29	2.2
	$ 1,339	100.0

7. **Inflation rate of liability claims.** Claims of all injury types were increasing at approximately 12.9% per annum (more than twice the Consumer Price Index increase). Claimants with counsel received more claim dollars for similar injuries. Furthermore, their rate of increase from 1988 to 1990 was higher than the claimants without counsel (14.0% vs. 10.9%). The following table shows the annual claim inflation rate by category of claim.

Type of Injury	Represented by Counsel	Average Claim Size 1988	Average Claim Size 1990	Annual Increase
Soft Tissue Only	no	$2,830	$3,554	+12.1%
Soft Tissue Only	yes	$7,459	$9,350	+12.0%
Other	no	$3,233	$3,947	+10.5%
Other	yes	$20,422	$27,433	+15.9%
All	no	$3,042	$3,744	+10.9%
All	yes	$15,358	$19,954	+14.0%

As salary increase is between 4% to 6% per annum from 1988 to 1990, one can only conclude that the increase in non-pecuniary loss is the major cause of double digit inflation in liability claims.

8. **Use of the court system.** 50% of the liability insurance claimants were represented by counsel; the rate had not changed from 1988 to 1990. One-quarter of the cases had commenced action. About 10% had started examination for discovery; 1% had pre-trial, and less than 1% had gone through trial.

Alberta
AUTOMOBILE INSURANCE
BOARD

19th Floor, 10025 Jasper Avenue, Edmonton, Alberta, Canada T5J 3Z5 403/427-5428

GENERAL INSTRUCTIONS

1. Indicate company number, your initials and claim number clearly for future reference.

2. This survey form is to be completed for each claimant. For example, if an accident gives rise to three claimants, three separate forms have to be completed.

3. All dollar figures are in whole dollars. Absolutely no cent should be shown.

4. All dollar figures which should balance to the answers of other questions will be checked.

5. All dates are in international convention. They are shown as year, month and day. Where necessary, you must use leading zeros; eg., you must code January 9, 1988 as 88 01 09.

6. Where a dollar amount is expected, a blank will imply 0.

7. Where a check mark "X" or a selection "a number" is expected, you MUST pick the most appropriate category. Otherwise, the diskette may be returned.

ALBERTA AUTOMOBILE INSURANCE BOARD

MOTOR VEHICLE THIRD PARTY LIABILITY CLAIM SURVEY

---

[1] Company number |_|_|_|

[2] Your initials |_|_|_|

[3] Claim number |_|_|_|_|_|_|_|_|_|_|_|_|_|

[4] Claimant number |_|_|
(including claim without payment
but must have injury)

[5] Date of accident YY |1|9|_|_| MM |_|_| DD |_|_|

[6] Date claim was notified to your company YY |1|9|_|_| MM |_|_| DD |_|_|

[7] Coverage (check all which are applicable) ☐ B.I. ☐ P.D.
☐ SEF 42/44

[8] Place of accident (check one box) ☐ Alberta
☐ other jurisdictions in Canada ☐ U.S.A.

[9] Policy limit (section A) |_|_|_|_|0|0|0| Complete the next limit figure if applicable, limit has been reduced to |_|_|_|_|0|0|0| due to breach of policy conditions.

ALBERTA AUTOMOBILE INSURANCE BOARD

[10] Claimant category |__|

1: third party driver
2: third party passenger
3: named insured driver
4: named insured passenger in insured's vehicle
5: passenger (not named insured) in insured's vehicle
6: pedestrian or cyclist
7: other

[11] Sex of claimant |__| 1: male 2: female

[12] Date of birth of claimant YY |1|9|__|__| MM |__|__| DD |__|__|

[13] Accident type |__| 1: single vehicle 2: multiple vehicle

[14] Type of vehicles involved in the accident:

|__| insured's vehicle |__| third party's vehicle (if applicable)

1: car
2: pick-up truck/van
3: motorcycle
4: bus
5: snow vehicle
6: ATV
7: heavy truck (over 4 tonnes or 10,000 pounds)
8: taxi
9: other

[15] Description of insured's vehicle: model year |__|__|__|__| IBC Vehicle code |__|__|__|__|
Make of vehicle |__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|

[16] Description of third party's vehicle: model year |__|__|__|__| IBC Vehicle code |__|__|__|__|
Make of vehicle |__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|

[17] Degree of fault (based on your assessment): driver of insured vehicle |__|__|__| %
claimant |__|__|__| % The two figures need not add up to 100%.

[18] Date the file was closed (as determined by your computer records).
YY 1 9 ☐ ☐ MM ☐ ☐ DD ☐ ☐

[19] Condition of claimant ☐ 1: deceased 2: injured 3: not injured
If the answer is 1 or 3, then go to question 22.

[20] Is it likely that the injury will be of a permanent nature?
☐ No ☐ Yes ☐ Maybe
If the answer is yes or maybe, indicate in the next question which injury type prompts you to draw this conclusion.

[21] Type of injury (Check more than one if necessary)
INSTRUCTION: first check the part(s) of the body injured, then check the type(s) of injury corresponding to the part of the body. Also include whether the injury is of a permanent nature.

Part of Body	Injury of a Permanent Nature	Description of Injury
☐ 99 none	☐	☐ nominal value (shaken up)
	☐	☐ psychological trauma
☐ 0 brain or spinal column	☐	☐ paraplegic or quadraplegic
	☐	☐ other

[21] Continued

Part of Body	Injury of a Permanent Nature	Description of Injury
☐ 1 head	☐	☐ fracture
	☐	☐ concussion
☐ 2 face	☐	☐ fracture
	☐	☐ laceration with serious scar
	☐	☐ laceration - no scar
☐ 3 eye	☐	☐ partial loss or loss of use of 1 or 2 eyes
	☐	☐ total loss or loss of use of 1 or 2 eyes
☐ 4 ears	☐	☐ partial loss or loss of use of 1 or 2 ears
	☐	☐ total loss or loss of use of 1 or 2 ears
☐ 5 nose	☐	☐ resulting in disfigurement
	☐	☐ no disfigurement

[21] Continued

Part of Body	Injury of a Permanent Nature	Description of Injury
☐ 6 teeth and jaw	☐	☐ fracture
	☐	☐ loss of teeth
	☐	☐ other
☐ 7 voice and larynx	☐	☐ loss of voice
	☐	☐ other
☐ 8 neck	☐	☐ soft tissue
	☐	☐ vertebrae/disc fracture
	☐	☐ psychological trauma
☐ 9 back	☐	☐ soft tissue
	☐	☐ vertebrae/disc fracture
	☐	☐ psychological trauma
☐ 10 chest and ribs	☐	☐ fracture
	☐	☐ other

[21] Continued

Part of Body	Injury of a Permanent Nature	Description of Injury
☐ 11 internal organs	☐	☐ surgery is required
	☐	☐ other
☐ 12 shoulder	☐	☐ soft tissue
	☐	☐ fracture
	☐	☐ laceration
	☐	☐ other
☐ 13 arm and hand	☐	☐ fracture
	☐	☐ loss of arm or hand
	☐	☐ loss of both arms or hands
	☐	☐ laceration
	☐	☐ loss of fingers
	☐	☐ other

[21] Continued

Part of Body	Injury of a Permanent Nature	Description of Injury
☐ 14 elbow	☐	☐ fracture
	☐	☐ other
☐ 15 wrist	☐	☐ fracture
	☐	☐ other
☐ 16 pelvis and hip	☐	☐ fracture
	☐	☐ other
☐ 17 leg and foot	☐	☐ fracture
	☐	☐ loss of leg or foot
	☐	☐ laceration
	☐	☐ loss of both legs or feet
	☐	☐ other

[21] Continued

Part of Body	Injury of a Permanent Nature	Description of Injury
☐ 18 knee	☐	☐ soft tissue
	☐	☐ fracture
	☐	☐ other
☐ 19 ankle	☐	☐ fracture
	☐	☐ other

[22] Employment status at time of accident of claimant ☐

1: employed full-time
2: employed part-time
3: student - 16 and over
4: retired
5: unemployed
6: homemaker
7: preschooler/student under 16
8: other

[23] Gross (weekly) employment income of claimant $ ☐☐☐☐

Number of months employed during the 12 months preceding the date of accident ☐☐

[24] Amount of actual time loss of claimant: ☐☐ Yrs. ☐☐ Wks. ☐ Days including intermittent time off. Use your best estimate here, do not leave it blank.

☐ permanently disabled

[25] Settlement, or breakdown of award if case tried:

(a) Special damages up to date of trial or settlement:

loss of employment income $

other income loss (not employment income) $

other out of pocket expense $

sub-total $

(b) General damages:

non-pecuniary $

future employment income $

future care $

gross-up for tax $

fund management $

sub-total $

(c) Party and party costs including disbursements $

(d) Prejudgement interest $

☐ stated in settlement

☐ estimated

Grand total 25(a)+25(b)+25(c)+25(d) $

[26] Breakdown of allocated claims expenses (exclude staff adjuster):

(a) Fees paid to outside lawyer $ |_|_|_|_|_|_|_|_|

(b) Fees paid to independent adjuster $ |_|_|_|_|_|_|_|_|

(c) Fees paid to defence medical $ |_|_|_|_|_|_|_|_|

(d) Fees paid to other experts $ |_|_|_|_|_|_|_|_|

(e) Other $ |_|_|_|_|_|_|_|_|

[27] Fees allocated to in-house lawyer $ |_|_|_|_|_|_|_|_|

[28] Section B benefits from claimant's insurer (provide information from your file).

name of insurer of the claimant (if there is one) |_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|

|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|

medical $ |_|_|_|_|_|_|_|

long term care $ |_|_|_|_|_|_|_|

chiropractor $ |_|_|_|_|_|_|_|

rehabilitation $ |_|_|_|_|_|_|_|

vocational training $ |_|_|_|_|_|_|_|

funeral $ |_|_|_|_|_|_|_|

death - principal sum $ |_|_|_|_|_|_|_|

death - survivor benefit $ |_|_|_|_|_|_|_| |_|_|_| Weekly benefit

disability - employed $ |_|_|_|_|_|_|_| |_|_|_| Weekly benefit

disability - spousal $ |_|_|_|_|_|_|_| |_|_|_| Weekly benefit

other $ |_|_|_|_|_|_|_|

total $ |_|_|_|_|_|_|_|

[29] Property Damage Payments:

Third Party Vehicle Damage $ |_|_|_|_|_|_|_|_|

Other Property Damage $ |_|_|_|_|_|_|_|_|

[30] Collision payments to your insured $ |_|_|_|_|_|_|_|_|

Deductible paid by your insured $ |_|_|_|_|

|_| No collision coverage

TYPE OF COLLATERAL BENEFITS AVAILABLE TO THE CLAIMANT For questions 31 to 33: Try your best to fill in the amount.

[31] Government Program

U.I.C.

Weekly benefit $ |_|_|_|_| Duration |_|_|_|_| weeks

Total amount $ |_|_|_|_|_|_|

[32] Employer-sponsored salary continuance insurance programs (e.g. long term disability)

Weekly benefit $ |_|_|_|_| Duration |_|_|_|_| weeks

Total amount $ |_|_|_|_|_|_|

[33] Personal insurance

Weekly benefit $ |_|_|_|_| Duration |_|_|_|_| weeks

Total amount $ |_|_|_|_|_|_|

[34] How many of your insureds received accident benefits from your company as a result of this accident? |_|_|

[35] Total amount of accident benefits paid and payable to your insureds.

\$ ☐☐☐☐☐☐☐

[36] How many of your insureds are permanently disabled? ☐☐

1st insured:	Weekly benefit	\$ ☐☐☐☐
2nd insured:	Weekly benefit	\$ ☐☐☐☐
3rd insured:	Weekly benefit	\$ ☐☐☐☐
4th insured:	Weekly benefit	\$ ☐☐☐☐

[37] Additional information (check yes or no):

		Yes	No
(a)	Was claimant represented by counsel?	☐	☐
(b)	Was action commenced?	☐	☐
(c)	Was there examination for discovery?	☐	☐
(d)	Was case pre-tried?	☐	☐
(e)	Was case tried by jury?	☐	☐
(f)	Was there an appeal?	☐	☐
(g)	If appealed, was case appealed by plaintiff?	☐	☐

[38] Indicate when settlement was concluded (check only ONE):

(a) before action commenced ☐

(b) after action commenced but before examination for discovery ☐

(c) after examination for discovery but before pre-trial ☐

(d) at pre-trial or as an immediate consequence (i.e., within 10 days) of pre-trial ☐

(e) between pre-trial and date action called for trial ☐

(f) at trial ☐

(g) after trial ☐

[39] Did gross value of claim exceed policy limit in question 9? Yes ☐ No ☐

[40] Was the claim a structured settlement? Yes ☐ No ☐

If yes, answer the following:

(a) gross amount of claim [from question 25] $ ☐☐☐☐☐☐☐☐

(b) interim and other payments $ ☐☐☐☐☐☐☐☐

(c) party and party costs [from 25(c)] $ ☐☐☐☐☐☐☐☐

(d) cost of annuity [must equal 40(a) - (b) - (c)] $ ☐☐☐☐☐☐☐☐

(e) brokerage fee or other fee (if known) $ ☐☐☐☐☐☐☐☐

[41] IBC statistical territory code |1|0|☐ of your insured vehicle.

[42] IBC class code (i.e., type of use) ☐☐ of your insured vehicle.

BODILY INJURY CLAIMS SURVEY RESULTS

QUESTION 5 - YEAR OF ACCIDENT

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	464	473	66	71
NUMBER USEABLE	464	473	66	71
	PRIVATE PASSENGER		OTHER	
	% accidents		% accidents	
DURING OR BEFORE 1984	9.3	2.5	15.2	4.2
DURING 1985	7.5	2.1	12.1	9.9
DURING 1986	20.5	6.1	24.2	2.8
DURING 1987	32.1	7.8	22.7	7.0
DURING 1988	30.6	27.9	25.8	26.8
DURING 1989	0.0	38.7	0.0	31.0
DURING 1990	0.0	14.8	0.0	18.3

QUESTION 6 - DAYS TILL CLAIM WAS REPORTED

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	568	609	74	88
NUMBER USEABLE	568	605	74	88
	PRIVATE PASSENGER		OTHER	
	% claimants		% claimants	
LESS THAN ONE WEEK	77.6	81.5	56.8	60.2
ONE WEEK	1.4	1.7	1.4	3.4
TWO WEEKS	6.9	5.6	20.3	13.6
THREE WEEKS	3.3	3.0	4.1	2.3
FOUR WEEKS	1.9	0.8	2.7	3.4
GREATER THAN FOUR WEEKS	8.8	7.4	14.9	17.0

QUESTION 7 - COVERAGES

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	464	473	66	71
NUMBER USEABLE	464	473	66	71
	PRIVATE PASSENGER		OTHER	
	% accidents		% accidents	
B.I.	99.4	99.6	92.4	95.8
P.D.	76.1	64.3	60.6	71.8
SEF 42	3.7	3.8	3.0	0.0

QUESTION 8 - PLACE OF ACCIDENT

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	464	473	66	71
NUMBER USEABLE	464	473	66	71
	PRIVATE PASSENGER		OTHER	
	% accidents		% accidents	
ALBERTA	95.0	93.0	89.4	93.0
OTHER JUR. IN CANADA	3.9	5.9	9.1	7.0
U.S.A.	1.1	1.1	1.5	0.0

QUESTION 9 - POLICY LIMITS

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	464	473	66	71
NUMBER USEABLE	464	473	66	71
	PRIVATE PASSENGER		OTHER	
	% accidents		% accidents	
UP TO $200,000	6.5	3.4	4.5	5.6
$300,000	3.2	1.5	0.0	0.0
$500,000	45.3	39.1	19.7	9.9
$1,000,000	44.0	54.1	63.6	70.4
OVER $1,000,000	1.1	1.9	12.1	14.1

BODILY INJURY CLAIMS SURVEY RESULTS

QUESTION 10 - CLAIMANT CATEGORY

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	568	609	74	88
NUMBER USEABLE	568	609	74	88
	PRIVATE PASSENGER % claimants		OTHER % claimants	
THIRD PARTY DRIVER	65.0	58.1	51.4	58.0
THIRD PARTY PASSENGER	23.6	27.6	21.6	29.5
NAMED INSURED DRIVER	0.2	0.5	1.4	0.0
NAMED INSURED PASSENGER	0.4	0.8	1.4	1.1
PASSENGER (NOT NAMED INSURED)	2.5	4.9	10.8	6.8
PED.OR CYCLIST	7.7	7.9	12.2	2.3
OTHER	0.7	0.2	1.4	2.3

QUESTION 11 - SEX OF CLAIMANT

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	568	609	74	88
NUMBER USEABLE	568	609	74	88
	PRIVATE PASSENGER % claimants		OTHER % claimants	
MALE	46.1	49.3	56.8	47.7
FEMALE	53.9	50.7	43.2	52.3

QUESTION 12 - AGE OF CLAIMANT

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	568	609	74	88
NUMBER USEABLE	494	545	68	84
	PRIVATE PASSENGER % claimants		OTHER % claimants	
LESS THAN 16 YRS	3.0	5.1	0.0	3.6
16 TO 24 YRS	14.0	20.0	13.2	16.7
25 TO 34 YRS.	32.8	31.0	25.0	21.4
35 TO 44 YRS	23.3	16.5	22.1	26.2
45 TO 54 YRS	13.4	12.5	11.8	15.5
55 TO 64 YRS	7.9	7.5	10.3	2.4
MORE THAN 65 YRS	5.7	7.3	17.6	14.3

QUESTION 13 - ACCIDENT TYPE

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	464	473	66	71
NUMBER USEABLE	464	473	66	71
	PRIVATE PASSENGER % accidents		OTHER % accidents	
SINGLE VEHICLE	9.5	11.4	21.2	8.5
MULTIPLE VEHICLE	90.5	88.6	78.8	91.5

BODILY INJURY CLAIMS SURVEY RESULTS

QUESTION 14 - TYPE OF VEHICLE INVOLVED (INSURED)

	PRIVATE PASSENGER 1988	PRIVATE PASSENGER 1990	OTHER 1988	OTHER 1990
NUMBER OF RECORDS	464	473	66	71
NUMBER USEABLE	464	473	66	71
	PRIVATE PASSENGER % accidents		OTHER % accidents	
CAR	76.1	69.3	30.3	29.6
PICK-UP TRUCK	22.6	28.1	39.4	45.1
MOTORCYCLE	0.6	0.2	10.6	8.5
BUS	0.0	0.2	6.1	1.4
SNOW VEHICLE	0.0	0.0	0.0	0.0
ATV	0.0	0.0	0.0	0.0
HEAVY TRUCK	0.0	0.4	13.6	12.7
TAXI	0.0	0.0	0.0	1.4
OTHER	0.6	1.7	0.0	1.4

QUESTION 17 - DEGREE OF FAULT OF DRIVER

	PRIVATE PASSENGER 1988	PRIVATE PASSENGER 1990	OTHER 1988	OTHER 1990
NUMBER OF RECORDS	464	473	66	71
NUMBER USEABLE	463	469	66	71
	PRIVATE PASSENGER % accidents		OTHER % accidents	
NONE	2.4	0.9	1.5	4.2
LESS THAN 100%	6.9	10.4	13.6	5.6
100%	90.7	88.7	84.8	90.1

QUESTION 17 - DEGREE OF FAULT OF CLAIMANT

	PRIVATE PASSENGER 1988	PRIVATE PASSENGER 1990	OTHER 1988	OTHER 1990
NUMBER OF RECORDS	568	609	74	88
NUMBER USEABLE	521	533	73	86
	PRIVATE PASSENGER % claimants		OTHER % claimants	
NONE	92.1	90.4	90.4	94.2
LESS THAN 100%	6.0	8.3	9.6	4.7
100%	1.9	1.3	0.0	1.2

BODILY INJURY CLAIMS SURVEY RESULTS

BODILY INJURY CLAIMS SURVEY RESULTS

QUESTION 18 - NUMBER OF MONTHS TILL CLAIM WAS CLOSED

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	568	609	74	88
NUMBER USEABLE	568	609	74	88
	PRIVATE PASSENGER % claimants		OTHER % claimants	
LESS THAN 1 MONTH	4.8	2.8	8.1	2.3
UP TO 2 MONTHS	5.3	4.1	1.4	3.4
UP TO 3 MONTHS	6.0	2.6	5.4	1.1
UP TO 4 MONTHS	3.3	3.1	1.4	4.5
4 TO 6 MONTHS	10.4	8.2	13.5	15.9
6 TO 8 MONTHS	7.7	8.4	9.5	2.3
8 TO 10 MONTHS	7.2	6.9	4.1	3.4
10 TO 12 MONTHS	5.8	6.2	5.4	8.0
12 TO 18 MONTHS	11.8	17.4	5.4	13.6
18 TO 24 MONTHS	12.9	14.1	10.8	18.2
24 TO 36 MONTHS	12.0	13.5	21.6	13.6
36 TO 48 MONTHS	6.9	7.9	6.8	4.5
48 TO 60 MONTHS	3.3	2.1	1.4	4.5
MORE THAN 60 MONTHS	2.6	2.6	5.4	4.5

QUESTION 19 - CONDITION OF CLAIMANT

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	568	609	74	88
NUMBER USEABLE	568	609	74	88
	PRIVATE PASSENGER % claimants		OTHER % claimants	
DECEASED	1.2	1.1	5.4	1.1
INJURED	93.1	96.1	86.5	96.6
NOT INJURED	5.6	2.8	8.1	2.3

QUESTION 20 - INJURY OF PERMANENT NATURE

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	568	609	74	88
NUMBER USEABLE	568	609	74	88
	PRIVATE PASSENGER % claimants		OTHER % claimants	
NO	90.8	92.1	83.8	92.0
YES	5.6	5.4	12.2	5.7
MAYBE	3.5	2.5	4.1	2.3

BODILY INJURY CLAIMS SURVEY RESULTS

QUESTION 21 - TYPE OF INJURY

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	568	609	74	88
NUMBER USEABLE	568	609	74	88
	PRIVATE PASSENGER % claimants		OTHER % claimants	
NONE				
NOMINAL VALUE (SHAKEN UP)	15.8	10.3	5.4	3.4
PSYCHOLOGICAL	1.4	1.5	0.0	2.3
BRAIN OR SPINAL COLUMN				
PARAPLEGIC OR QUADRAPLEGIC	0.0	0.2	0.0	0.0
OTHER	0.7	1.3	0.0	0.0
HEAD				
FRACTURE	0.7	1.3	0.0	0.0
CONCUSSION	5.5	6.6	5.4	2.3
FACE				
FRACTURE	0.4	0.3	0.0	1.1
LACERATION WITH SCAR	1.4	1.5	0.0	1.1
LACERATION NO SCAR	4.2	5.4	1.4	3.4
EYE				
PARTIAL LOSS OR LOSS OF USE	0.2	0.8	0.0	0.0
TOTAL LOSS OR LOSS OF USE OF	0.0	0.0	0.0	0.0
EARS				
PARTIAL LOSS OR LOSS OF USE	0.2	0.3	0.0	0.0
TOTAL LOSS OR LOSS OF USE OF	0.0	0.0	0.0	0.0
NOSE				
RESULTING IN DISFIGUREMENT	0.0	0.3	0.0	0.0
NO DISFIGUREMENT	1.1	1.3	4.1	1.1
TEETH AND JAW				
FRACTURE	0.9	0.5	0.0	0.0
LOSS OF TEETH	0.7	1.1	1.4	0.0
OTHER	2.3	2.5	1.4	1.1
VOICE AND LARYNX				
LOSS OF VOICE	0.0	0.0	0.0	0.0
OTHER	0.2	0.2	0.0	0.0
NECK				
SOFT TISSUE	53.9	58.9	41.9	60.2
VERTEBRAE\DISC FRACTURE	0.5	0.5	0.0	0.0
PSYCHOLOGICAL TRAUMA	1.1	1.8	1.4	0.0
BACK				
SOFT TISSUE	32.2	34.0	43.2	53.4
VERTEBRAE\DISC FRACTURE	1.8	0.5	1.4	1.1
PSYCHOLOGICAL TRAUMA	0.9	1.5	0.0	0.0
CHEST AND RIBS				
FRACTURE	2.5	1.5	5.4	1.1
OTHER	3.7	5.9	5.4	3.4
INTERNAL ORGANS				
SURGERY IS REQUIRED	0.2	0.5	4.1	0.0
OTHER	0.9	0.8	0.0	1.1
SHOULDER				
SOFT TISSUE	8.3	10.0	12.2	4.5
FRACTURE	0.5	0.2	1.4	0.0
LACERATION	0.2	0.5	0.0	0.0
OTHER	1.2	1.0	0.0	0.0

BODILY INJURY CLAIMS SURVEY RESULTS

QUESTION 21 - TYPE OF INJURY continued

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
	% claimants		% claimants	
ARM AND HAND				
FRACTURE	2.1	1.6	5.4	3.4
LOSS OF ARM OR HAND	0.0	0.0	0.0	0.0
LOSS OF BOTH ARMS OR HANDS	0.0	0.0	0.0	0.0
LACERATION	1.4	1.6	0.0	2.3
LOSS OF FINGERS	0.0	0.0	0.0	0.0
OTHER	4.8	6.2	2.7	2.3
ELBOW				
FRACTURE	0.2	0.3	2.7	0.0
OTHER	1.2	2.3	1.4	5.7
WRIST				
FRACTURE	0.7	0.7	1.4	1.1
OTHER	0.7	1.6	0.0	2.3
PELVIS AND HIP				
FRACTURE	1.8	0.8	4.1	2.3
OTHER	3.0	3.0	1.4	4.5
LEG AND FOOT				
FRACTURE	2.5	2.6	4.1	0.0
LOSS OF LEG OR FOOT	0.0	0.0	0.0	0.0
LACERATION	2.1	2.0	0.0	1.1
LOSS OF BOTH LEGS OR FEET	0.0	0.0	0.0	0.0
OTHER	4.0	5.1	6.8	3.4
KNEE				
SOFT TISSUE	4.8	5.3	1.4	3.4
FRACTURE	0.4	1.0	2.7	0.0
OTHER	3.2	1.8	5.4	2.3
ANKLE				
FRACTURE	0.5	0.5	4.1	0.0
OTHER	0.9	2.1	2.7	1.1

QUESTION 22 - EMPLOYMENT STATUS

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	568	609	74	88
NUMBER USEABLE	568	609	74	88
	PRIVATE PASSENGER		OTHER	
	% claimants		% claimants	
EMPLOYED FULL-TIME	57.4	55.3	55.4	45.5
EMPLOYED PART-TIME	6.5	8.7	5.4	4.5
STUDENT - 16 AND OVER	7.4	6.6	6.8	5.7
RETIRED	3.7	6.1	6.8	3.4
UMEMPLOYED	5.9	6.4	4.1	13.6
HOMEMAKER	5.3	6.6	12.2	14.8
PRESCHOOLER	5.8	5.4	2.7	4.5
OTHER	7.0	4.9	6.8	8.0

BODILY INJURY CLAIMS SURVEY RESULTS

QUESTION 23 - GROSS WEEKLY EMPLOYMENT INCOME

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	326	337	41	40
NUMBER USEABLE	202	220	29	17
	PRIVATE PASSENGER		OTHER	
	% employed		% employed	
LESS THAN $200	5.0	5.5	3.4	0.0
$201 TO $300	17.8	21.4	13.8	0.0
$301 TO $400	29.7	23.6	34.5	29.4
$401 TO $500	25.2	24.1	20.7	17.6
$501 TO $600	7.9	9.1	10.3	35.3
$601 TO $700	5.0	5.5	10.3	0.0
$701 TO 800	5.0	6.4	3.4	5.9
$801 TO $900	2.5	2.3	0.0	5.9
$901 TO $1000	1.5	1.4	3.4	5.9
MORE THAN $1000	0.5	0.9	0.0	0.0
AVERAGE $	439.8	448.9	439.2	544.9

QUESTION 23 - NUMBER OF MONTHS EMPLOYED PRECEDING ACCIDENT

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	363	390	45	44
NUMBER USEABLE	281	319	32	22
	PRIVATE PASSENGER		OTHER	
	% employed		% employed	
LESS THAN 2 MONTHS	1.4	0.9	0.0	0.0
3 MONTHS	0.4	0.3	0.0	0.0
4 MONTHS	0.4	2.5	0.0	0.0
5 MONTHS	0.7	1.3	0.0	0.0
6 MONTHS	3.2	4.4	9.4	9.1
7 MONTHS	0.4	0.3	0.0	0.0
8 MONTHS	0.7	0.6	0.0	4.5
9 MONTHS	0.0	0.3	3.1	0.0
10 MONTHS	0.0	0.3	0.0	0.0
11 MONTHS	0.4	0.0	0.0	0.0
12 MONTHS	92.5	89.0	87.5	86.4

QUESTION 24 - ACTUAL TIME LOSS

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	568	609	74	88
NUMBER USEABLE	271	284	28	24
	PRIVATE PASSENGER		OTHER	
	% claimants		% claimants	
1 WEEK	35.4	35.9	35.7	41.7
2 WEEKS	12.5	12.0	3.6	16.7
3 WEEKS	11.8	10.2	3.6	20.8
4 WEEKS	2.6	2.8	10.7	4.2
2 MONTHS	15.1	13.7	17.9	4.2
3 MONTHS	5.9	8.1	10.7	4.2
4 MONTHS	5.5	6.3	3.6	4.2
5 MONTHS	2.6	2.5	0.0	0.0
6 MONTHS	3.0	2.1	3.6	0.0
7 MONTHS	1.1	1.8	0.0	0.0
8 MONTHS	0.4	0.0	3.6	0.0
9 MONTHS	1.1	0.4	3.6	0.0
10 MONTHS	0.4	0.4	0.0	0.0
11 MONTHS	0.4	0.0	0.0	0.0
12 MONTHS	0.0	0.4	0.0	0.0
2 YEARS	0.0	0.0	0.0	0.0
3 YEARS	0.0	0.0	0.0	0.0
4 YEARS	0.0	0.0	0.0	0.0
5 YEARS	0.0	0.0	0.0	0.0
PERMANENT	2.2	3.5	3.6	4.2

BODILY INJURY CLAIMS SURVEY RESULTS

QUESTION 25 - TOTAL PAYMENT
CLOSED IN 1988

	PRIVATE PASSENGER		OTHER	
NUMBER OF RECORDS		568		74
NUMBER USEABLE		568		74
	PRIVATE	PASSENGER		OTHER
	%$	% claimants	%$	% claimants
LESS THAN $1,000	1.5	27.8	0.6	27.0
$1,001 TO $2,000	2.3	12.0	0.5	6.8
$2,001 TO $3,000	3.1	9.6	1.3	9.5
$3,001 TO $4,000	3.6	8.1	2.2	10.8
$4,001 TO $5,000	3.1	5.5	0.7	2.7
$5,001 TO $6,000	3.7	5.3	1.6	5.4
$6,001 TO $7,000	3.2	3.9	1.9	5.4
$7,001 TO $8,000	2.7	2.8	1.1	2.7
$8,001 TO $9,000	3.3	3.0	0.0	0.0
$9,001 TO $10,000	3.4	2.8	1.4	2.7
$10,001 TO $15,000	9.2	6.0	5.0	6.8
$15,001 TO $20,000	8.4	3.9	6.3	6.8
$20,001 TO $25,000	10.6	3.7	1.8	1.4
$25,001 TO $50,000	15.0	3.5	2.8	1.4
$50,001 TO $75,000	7.3	1.1	9.1	2.7
$75,001 TO $100,000	2.0	0.2	0.0	0.0
$100,001 TO $200,000	6.0	0.4	47.6	6.8
$200,001 TO $300,000	11.5	0.4	16.2	1.4
$300,001 TO $400,000	0.0	0.0	0.0	0.0
$400,001 TO $500,000	0.0	0.0	0.0	0.0
MORE THAN $500,000	0.0	0.0	0.0	0.0

Note: %$ means percentage of total dollars paid to claimants in each band
Note: % claimants means percentage of claimants in each band

QUESTION 25 - TOTAL PAYMENT
CLOSED IN 1990

	PRIVATE PASSENGER		OTHER	
NUMBER OF RECORDS		609		88
NUMBER USEABLE		609		88
	PRIVATE	PASSENGER		OTHER
	%$	% claimants	%$	% claimants
LESS THAN $1,000	0.8	18.3	1.2	20.5
$1,001 TO $2,000	1.9	13.7	3.2	14.8
$2,001 TO $3,000	3.0	13.2	2.2	6.8
$3,001 TO $4,000	3.3	10.6	5.3	11.4
$4,001 TO $5,000	2.4	5.9	7.5	12.5
$5,001 TO $6,000	2.9	6.0	2.5	3.4
$6,001 TO $7,000	2.2	3.9	5.9	6.8
$7,001 TO $8,000	1.2	1.8	3.4	3.4
$8,001 TO $9,000	1.6	2.2	1.2	1.1
$9,001 TO $10,000	2.6	3.2	2.9	2.3
$10,001 TO $15,000	7.1	6.7	4.1	2.3
$15,001 TO $20,000	6.8	4.5	8.5	3.4
$20,001 TO $25,000	5.4	2.8	13.4	4.5
$25,001 TO $50,000	11.2	3.9	16.2	4.5
$50,001 TO $75,000	9.3	1.7	8.0	1.1
$75,001 TO $100,000	2.8	0.3	14.4	1.1
$100,001 TO $200,000	6.1	0.5	0.0	0.0
$200,001 TO $300,000	6.4	0.3	0.0	0.0
$300,001 TO $400,000	4.9	0.2	0.0	0.0
$400,001 TO $500,000	6.0	0.2	0.0	0.0
MORE THAN $500,000	11.9	0.2	0.0	0.0

Note: %$ means percentage of total dollars paid to claimants in each band
Note: % claimants means percentage of claimants in each band

BODILY INJURY CLAIMS SURVEY RESULTS

QUESTION 25 - BREAKDOWN OF SETTLEMENT CLOSED IN 1988

	PRIVATE PASSENGER	OTHER
NUMBER OF RECORDS	568	74
NUMBER USEABLE	568	74

	PRIVATE PASSENGER		OTHER	
	% total $	% claimants	% total $	% claimants
LOSS OF EMPLOYMENT INCOME	13.3	34.0	8.7	33.8
OTHER INCOME LOSS	0.4	2.3	0.5	5.4
OUT OF POCKET	8.8	27.1	4.9	31.1
NON-PECUNIARY	61.1	91.0	41.9	90.5
FUTURE EMPLOYMENT INCOME	11.0	3.0	31.5	9.5
FUTURE CARE	0.6	1.4	0.0	0.0
GROSS-UP FOR TAX	0.0	0.5	0.0	0.0
FUND MANAGEMENT	0.0	0.0	0.0	0.0
PARTY AND PARTY COSTS	2.0	22.4	6.6	37.8
PREJUDGEMENT INTEREST	2.8	15.1	6.0	16.2

% total $ means percentage of total B.I. claim

QUESTION 25 - BREAKDOWN OF SETTLEMENT CLOSED IN 1990

	PRIVATE PASSENGER	OTHER
NUMBER OF RECORDS	609	88
NUMBER USEABLE	609	88

	PRIVATE PASSENGER		OTHER	
	% total $	% claimants	% total $	% claimants
LOSS OF EMPLOYMENT INCOME	14.0	31.0	11.8	20.5
OTHER INCOME LOSS	0.6	1.8	0.0	0.0
OUT OF POCKET	5.8	29.2	5.9	22.7
NON-PECUNIARY	50.1	92.0	68.4	93.2
FUTURE EMPLOYMENT INCOME	18.6	3.0	2.3	2.3
FUTURE CARE	3.3	1.8	0.4	2.3
GROSS-UP FOR TAX	0.8	0.3	0.0	0.0
FUND MANAGEMENT	0.2	0.3	0.0	0.0
PARTY AND PARTY COSTS	2.8	22.2	6.1	26.1
PREJUDGEMENT INTEREST	3.9	14.8	5.1	17.0

% total $ means percentage of total B.I. claim

QUESTION 26 - BREAKDOWN OF INTERNAL EXPENSES

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	284	307	49	56
NUMBER USEABLE	154	186	37	44

	PRIVATE PASSENGER		OTHER	
	% total $		% total $	
FEES PAID TO OUTSIDE LAWYER	7.2	8.6	6.1	13.1
FEES PAID TO INDEP. ADJUSTER	2.9	3.6	2.3	6.7
FEES PAID TO DEFENSE MEDICAL	0.6	0.5	0.1	1.1
FEES PAID TO OTHER EXPERTS	0.7	1.4	0.2	0.6
OTHER	0.4	0.2	0.4	0.0

% total $ means percentage of total B.I. claim

BODILY INJURY CLAIMS SURVEY RESULTS

QUESTION 27 - FEES ALLOCATED TO IN-HOUSE LAWYER

	PRIVATE PASSENGER 1988	PRIVATE PASSENGER 1990	OTHER 1988	OTHER 1990
NUMBER OF RECORDS	568	609	74	88
NUMBER USEABLE	12	9	1	0

	PRIVATE PASSENGER	% total $	OTHER	% total $
FEES PAID TO IN-HOUSE LAWYER	0.5	0.3	0.0	0.0

% total $ means percentage of total B.I. claim

QUESTION 28 - SECTION B BENEFITS CLOSED IN 1988

	PRIVATE PASSENGER	OTHER
NUMBER OF RECORDS	568	74
NUMBER USEABLE	44	10

	PRIVATE PASSENGER % total $	PRIVATE PASSENGER % claimants	OTHER % total $	OTHER % claimants
MEDICAL	0.6	77.3	0.6	60.0
LONG TERM CARE	0.0	0.0	0.0	0.0
CHRIOPACTOR	0.0	9.1	0.0	0.0
REHABILITION	0.0	0.0	0.0	0.0
VOCATIONAL TRAINING	0.0	0.0	0.0	0.0
FUNERAL	0.2	15.9	0.1	40.0
DEATH-PRINCIPAL SUM	0.2	15.9	8.8	40.0
DEATH- SURVIVOR BENEFIT	0.2	9.1	0.0	10.0
DISABILITY- EMPLOYED	2.3	100.0	3.5	100.0
DISABILITY- SPOUSAL	0.0	0.0	0.0	0.0
OTHER	0.0	9.1	0.0	0.0

% total $ means percentage of total B.I. claim

QUESTION 28 CONTINUED CLOSED IN 1990

	PRIVATE PASSENGER	OTHER
NUMBER OF RECORDS	609	88
NUMBER USEABLE	58	2

	PRIVATE PASSENGER % total $	PRIVATE PASSENGER % claimants	OTHER % total $	OTHER % claimants
MEDICAL	0.7	74.1	0.0	0.0
LONG TERM CARE	0.0	0.0	0.0	0.0
CHRIOPACTOR	0.0	5.2	0.1	50.0
REHABILITION	0.0	1.7	0.0	0.0
VOCATIONAL TRAINING	0.0	0.0	0.0	0.0
FUNERAL	0.1	12.1	0.0	50.0
DEATH-PRINCIPAL SUM	0.2	6.9	0.0	50.0
DEATH- SURVIVOR BENEFIT	0.4	10.3	0.0	0.0
DISABILITY- EMPLOYED	3.2	100.0	0.2	100.0
DISABILITY- SPOUSAL	0.0	0.0	0.0	0.0
OTHER	0.2	12.1	0.0	50.0

% total $ means percentage of total B.I. claim

BODILY INJURY CLAIMS SURVEY RESULTS

QUESTION 29 - THIRD PARTY VEHICLE DAMAGE

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	464	473	66	71
NUMBER USEABLE	401	389	47	60
	PRIVATE PASSENGER % accidents		OTHER % accidents	
LESS THAN $500	14.7	15.7	25.5	11.7
$501 TO $1,000	14.2	14.4	6.4	18.3
$1,001 TO $1,500	13.0	9.8	10.6	10.0
$1,501 TO $2,000	11.7	7.7	10.6	5.0
$2,001 TO $2,500	9.0	10.0	8.5	16.7
$2,501 TO $3,000	6.2	7.5	6.4	3.3
$3,001 TO 3,500	5.2	7.7	10.6	3.3
$3,501 TO $4,000	4.7	3.3	0.0	10.0
$4,001 TO $4,500	3.0	4.9	4.3	3.3
$4,501 TO $5,000	3.7	2.6	2.1	5.0
$5,001 TO $6,000	5.2	4.9	6.4	3.3
$6,001 TO $7,000	2.2	5.1	0.0	1.7
$7,001 TO $8,000	1.2	1.5	0.0	0.0
$8,001 TO $9,000	1.7	1.5	0.0	0.0
$9,001 TO $10,000	1.2	0.8	0.0	3.3
GREATER THAN $10,001	2.7	2.6	8.5	5.0

QUESTION 29 - OTHER PARTY VEHICLE DAMAGE

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	464	473	66	71
NUMBER USEABLE	56	56	4	9
	PRIVATE PASSENGER % accidents		OTHER % accidents	
LESS THAN $200	43.6	35.7	75.0	33.3
$201 TO $300	14.5	8.9	0.0	11.1
$301 TO $400	7.3	8.9	0.0	0.0
$401 TO $500	9.1	3.6	0.0	11.1
$501 TO $600	1.8	0.0	0.0	22.2
$601 TO $700	7.3	1.8	25.0	11.1
$701 TO 800	1.8	3.6	0.0	0.0
$801 TO $900	0.0	3.6	0.0	11.1
$901 TO $1,000	3.6	1.8	0.0	0.0
$1,001 TO $1,200	0.0	8.9	0.0	0.0
$1,201 TO $1,400	0.0	3.6	0.0	0.0
$1,401 TO $1,600	0.0	3.6	0.0	0.0
$1,601 TO $1,800	5.5	1.8	0.0	0.0
$1,801 TO $2,000	0.0	1.8	0.0	0.0
GREATER THAN $2,000	5.5	12.5	0.0	0.0

BODILY INJURY CLAIMS SURVEY RESULTS

QUESTION 31 - GOVERNMENT PLAN - U.I.C. AVERAGE WEEKLY BENEFIT

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	464	473	66	71
NUMBER USEABLE	2	2	0	0
AVERAGE SIZE	253	689	0	0

QUESTION 31 - GOVERNMENT PLAN - U.I.C. DURATION (WEEKS)

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	464	473	66	71
NUMBER USEABLE	2	2	0	0
AVERAGE DURATION	7	5	0	0

QUESTION 31 - GOVERNMENT PLAN - U.I.C. TOTAL BENEFIT

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	464	473	66	71
NUMBER USEABLE	2	2	0	0
AVERAGE BENEFIT	1782	3350	0	0

QUESTION 32 - EMPLOYER SPONSORED PROGRAMS - WEEKLY BENEFIT

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	464	473	66	71
NUMBER USEABLE	10	4	2	0
AVERAGE SIZE	450	567	252	0

QUESTION 32 - EMPLOYER SPONSORED PROGRAMS - AVERAGE DURATION (WEEKS)

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	464	473	66	71
NUMBER USEABLE	10	5	3	0
AVERAGE DURATION	7	4	60	0

QUESTION 32 - EMPLOYER SPONSORED PROGRAMS - TOTAL BENEFIT

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	464	473	66	71
NUMBER USEABLE	11	7	3	0
AVERAGE BENEFIT	3253	3463	10216	0

BODILY INJURY CLAIMS SURVEY RESULTS

QUESTION 33 - PERSONAL INSURANCE - WEEKLY BENEFIT

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	464	473	66	71
NUMBER USEABLE	0	0	0	0
AVERAGE SIZE	0	0	0	0

QUESTION 33 - PERSONAL INSURANCE - AVERAGE DURATION (WEEKS)

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	464	473	66	71
NUMBER USEABLE	0	0	0	0
AVERAGE DURATION	0	0	0	0

QUESTION 33 - EMPLOYER SPONSORED PROGRAMS - TOTAL BENEFIT

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	464	473	66	71
NUMBER USEABLE	0	1	0	0
TOTAL BENEFIT	0	617	0	0

QUESTION 34 - NUMBER OF INSUREDS RECEIVING ACCIDENT BENEFITS

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	568	609	74	88
NUMBER USEABLE	50	71	8	6
	PRIVATE PASSENGER		OTHER	
	% accidents		% accidents	
AVERAGE NUMBER	1.5	1.5	1.5	1.2

QUESTION 35 - TOTAL AMOUNT OF ACCIDENT BENEFITS

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	464	473	66	71
NUMBER USEABLE	44	56	9	4
	PRIVATE PASSENGER		OTHER	
	% accidents		% accidents	
LESS THAN $500	63.6	48.2	22.2	75.0
$501 TO $600	4.5	8.9	0.0	0.0
$601 TO $700	0.0	5.4	0.0	25.0
$701 TO $800	4.5	7.1	11.1	0.0
$801 TO $900	2.3	3.6	11.1	0.0
$901 TO $1000	6.8	1.8	11.1	0.0
$1001 TO 1100	0.0	0.0	0.0	0.0
$1101 TO $1200	0.0	0.0	0.0	0.0
$1201 TO $1300	0.0	3.6	0.0	0.0
$1301 TO $1400	4.5	0.0	0.0	0.0
$1401 TO $1500	0.0	1.8	0.0	0.0
MORE THAN $1500	13.6	19.6	44.4	0.0

BODILY INJURY CLAIMS SURVEY RESULTS

QUESTION 36 - AVERAGE WEEKLY BENEFIT OF 1ST INSURED

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	568	609	74	88
NUMBER USEABLE	17	24	0	1
AVERAGE WEEKLY BENEFIT	236	189	0	84

QUESTION 36 - AVERAGE WEEKLY BENEFIT OF 2ND INSURED

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	568	609	74	88
NUMBER USEABLE	5	1	0	0
AVERAGE WEEKLY BENEFIT	200	207	0	0

QUESTION 36 - AVERAGE WEEKLY BENEFIT OF 3RD INSURED

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	568	609	74	88
NUMBER USEABLE	2	1	0	0
AVERAGE WEEKLY BENEFIT	126	154	0	0

QUESTION 36 - AVERAGE WEEKLY BENEFIT OF 4TH INSURED

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	568	609	74	88
NUMBER USEABLE	0	0	0	0
AVERAGE WEEKLY BENEFIT	0	0	0	0

Note for question 36 - current maximum weekly benefit is $150

QUESTION 37 - ADDITIONAL INFORMATION

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	568	609	74	88
NUMBER USEABLE	568	609	74	88
	PRIVATE PASSENGER % claimants		OTHER % claimants	
REPRESENTED BY COUNSEL	49.6	50.1	60.8	51.1
ACTION COMMENCED	24.6	23.3	35.1	23.9
EXAMINATION FOR DISCOVERY	9.3	11.2	17.6	11.4
CASE PRE-TRIED	0.4	1.0	1.4	2.3
CASE TRIED BY JURY	0.2	0.2	0.0	0.0
CASE APPEALED	0.5	0.2	0.0	0.0
APPEALED BY PLANTIFF	0.4	0.2	0.0	0.0

QUESTION 41 - IBC STATISTICAL CODE

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	464	473	66	71
NUMBER USEABLE	463	473	66	71
	PRIVATE PASSENGER % accidents		OTHER % accidents	
MED. HAT,RED DEER	30.8	30.9	30.3	25.4
CALGARY	33.0	32.8	37.9	40.8
EDMONTON	33.2	33.6	28.8	31.0
NORTHERN DISTRICT	2.8	2.7	3.0	2.8

Alberta
AUTOMOBILE INSURANCE
BOARD

19th Floor, 10025 Jasper Avenue, Edmonton, Alberta, Canada T5J 3Z5 403/427-5428

GENERAL INSTRUCTIONS

1. Indicate company number, your initials and claim number clearly for future reference.

2. This survey form is to be completed for each claimant. For example, if an accident gives rise to three claimants, three separate forms have to be completed.

3. All dollar figures are in whole dollars. Absolutely no cent should be shown.

4. All dollar figures which should balance to the answers of other questions will be checked.

5. All dates are in international convention. They are shown as year, month and day. Where necessary, you must use leading zeros; eg., you must code January 9, 1988 as 88 01 09.

6. Where a dollar amount is expected, a blank will imply 0.

7. Where a check mark "X" or a selection "a number" is expected, you MUST pick the most appropriate category. Otherwise, the diskette may be returned.

ALBERTA AUTOMOBILE INSURANCE BOARD

MOTOR VEHICLE ACCIDENT BENEFIT CLAIM SURVEY

---

[1] Company number |_|_|_|

[2] Your initials |_|_|_|

[3] Claim number |_|_|_|_|_|_|_|_|_|_|_|_|_|

[4] Claimant number |_|_|
(including claim without payment
but must have injury)

[5] Date of accident YY |1|9|_|_| MM |_|_| DD |_|_|

[6] Date claim was notified to your company YY |1|9|_|_| MM |_|_| DD |_|_|

[7] Coverage (check all which are applicable)
|_| accident benefits |_| uninsured motorist

[8] Place of accident (check one box) |_| Alberta
|_| other jurisdictions in Canada |_| U.S.A.

[9] Claimant category |_|

1:	driver	4:	passenger: other
2:	passenger: spouse of driver	5:	pedestrian or cyclist
3:	passenger: dependent child	6:	other

ALBERTA AUTOMOBILE INSURANCE BOARD

[10] Sex of claimant |__| 1: male 2: female

[11] Date of birth of claimant YY |1|9|_|_| MM |_|_| DD |_|_|
Use UN if information is not available.

[12] Accident type |__| 1: single vehicle 2: multiple vehicle

[13]. Was the insured vehicle involved in the accident? |__| yes |__| no

[14] Type of vehicles involved in the accident:
|__| vehicle in which the claimant was an occupant or which struck pedestrian
|__| other vehicle involved (if applicable)

1:	car	2:	pick-up truck/van	3:	motorcycle
4:	bus	5:	snow vehicle	6:	ATV
7:	heavy truck (over 4 tonnes or 10,000 pounds)	8:	taxi	9:	other

[15] Degree of fault of the claimant (based on tort only):
If driver: |_|_|_| %
If a pedestrian or cyclist: |_|_|_| %
If other |_|_|0| %; you can override the zero only if you have evidence

[16] Degree of fault of the third party driver (if there is any)
|_|_|_| %, |__| no third party driver in the accident.

[17] Does the claimant who was an occupant of your insured vehicle have a B.I. liability claim against the third party's insurer or your company as a result of this accident?
|__| yes |__| no |__| unknown

[18] Does the third party (occupant of the other vehicle or pedestrian) have any B.I. liability claim against your company as a result of this accident?

☐ yes ☐ no ☐ no third party in the accident

[19] Date of settlement (final payment)

YY 1 9 _ _ MM _ _ DD _ _

[20] Condition of claimant ☐ 1: deceased 2: injured

If the answer is 1, then go to question 23.

[21] Is it likely that the injury will be of a permanent nature?

☐ No; ☐ Yes; ☐ Maybe

If the answer is yes or maybe, indicate in the next question which injury type prompts you to draw this conclusion.

[22] Type of injury (Check more than one if necessary)

INSTRUCTION: first check the part(s) of the body injured, then check the type(s) of injury corresponding to the part of the body. Also indicate whether the injury is of a permanent nature.

Part of Body	Injury of a Permanent Nature	Description of Injury
☐ 99 none	☐	☐ nominal value (shaken up)
	☐	☐ psychological trauma
☐ 0 brain or spinal column	☐	☐ paraplegic or quadraplegic
	☐	☐ other

[22] Continued

Part of Body	Injury of a Permanent Nature	Description of Injury
☐ 1 head	☐	☐ fracture
	☐	☐ concussion
☐ 2 face	☐	☐ fracture
	☐	☐ laceration with serious scar
	☐	☐ laceration - no scar
☐ 3 eye	☐	☐ partial loss or loss of use of 1 or 2 eyes
	☐	☐ total loss or loss of use of 1 or 2 eyes
☐ 4 ears	☐	☐ partial loss or loss of use of 1 or 2 ears
	☐	☐ total loss or loss of use of 1 or 2 ears
☐ 5 nose	☐	☐ resulting in disfigurement
	☐	☐ no disfigurement
☐ 6 teeth and jaw	☐	☐ fracture
	☐	☐ loss of teeth
	☐	☐ other

[22] Continued

Part of Body	Injury of a Permanent Nature	Description of Injury
☐ 7 voice and larynx	☐	☐ loss of voice
	☐	☐ other
☐ 8 neck	☐	☐ soft tissue
	☐	☐ vertebrae/disc fracture
	☐	☐ psychological trauma
☐ 9 back	☐	☐ soft tissue
	☐	☐ vertebrae/disc fracture
	☐	☐ psychological trauma
☐ 10 chest and ribs	☐	☐ fracture
	☐	☐ other
☐ 11 internal organs	☐	☐ surgery is required
	☐	☐ other

[22] Continued

Part of Body	Injury of a Permanent Nature	Description of Injury
☐ 12 shoulder	☐	☐ soft tissue
	☐	☐ fracture
	☐	☐ laceration
	☐	☐ other
☐ 13 arm and hand	☐	☐ fracture
	☐	☐ loss of arm or hand
	☐	☐ loss of both arms or hands
	☐	☐ laceration
	☐	☐ loss of fingers
	☐	☐ other
☐ 14 elbow	☐	☐ fracture
	☐	☐ other
☐ 15 wrist	☐	☐ fracture
	☐	☐ other

[22] Continued

Part of Body	Injury of a Permanent Nature	Description of Injury
☐ 16 pelvis and hip	☐	☐ fracture
	☐	☐ other
☐ 17 leg and foot	☐	☐ fracture
	☐	☐ loss of leg or foot
	☐	☐ laceration
	☐	☐ loss of both legs or feet
	☐	☐ other
☐ 18 knee	☐	☐ soft tissue
	☐	☐ fracture
	☐	☐ other
☐ 19 ankle	☐	☐ fracture
	☐	☐ other

[23] Employment status at time of accident of claimant |_|

1:	employed full-time	2:	employed part-time
3:	student (16 yrs. or older)	4:	retired
5:	unemployed	6:	homemaker
7:	preschooler/student under 16	8:	other

[24] Gross (weekly) employment income of claimant $ |_|_|_|_|

Number of months employed during the 12 months preceding the date of accident |_|_|

[25] Amount of actual time (including waiting period) loss of claimant:

|_|_| Yrs. |_|_| Wks. |_| Days including intermittent time off. Use your best estimate here, do not leave it blank.

|_| permanently disabled

[26] Payments to claimant:

Uninsured motorists - B.I. $ |_|_|_|_|_|_|

Uninsured motorists - P.D. $ |_|_|_|_|_|_|

[27] Section B benefits — Payments

medical $ |_|_|_|_|_|_|

long term care $ |_|_|_|_|_|_|

chiropractor $ |_|_|_|_|_|_|

rehabilitation $ |_|_|_|_|_|_|

vocational training $ |_|_|_|_|_|_|

funeral $ |_|_|_|_|_|_|

death - principal sum $ |_|_|_|_|_|_|

death - survivor benefit $ |_|_|_|_|_|_| |_|_|_| weekly benefit

disability - employed $ |_|_|_|_|_|_| |_|_|_| weekly benefit

disability - spousal $ |_|_|_|_|_|_| |_|_|_| weekly benefit

other $ |_|_|_|_|_|_|

Total $ |_|_|_|_|_|_|

[Type of collateral benefits available to the claimant.] For questions 28 to 30, try your best to fill in the amount.

[28] Government Program

U.I.C.

Weekly benefit $ |_|_|_|_|_| Duration |_|_|_|_| weeks

Total amount $ |_|_|_|_|_|_|

[29] Employer-sponsored salary continuance insurance programs (eg. long term disability)

Weekly benefit $ |_|_|_|_|_| Duration |_|_|_|_| weeks

Total amount $ |_|_|_|_|_|_|

[30] Personal insurance

Weekly benefit $ |_|_|_|_|_| Duration |_|_|_|_| weeks

Total amount $ |_|_|_|_|_|_|

[31] Breakdown of allocated claims expenses (exclude staff adjuster):

(a) Fees paid to outside lawyer $ |_|_|_|_|_|_|_|

(b) Fees paid to independent adjuster $ |_|_|_|_|_|_|_|

(c) Cost of medical $ |_|_|_|_|_|_|_|

(d) Cost of other experts $ |_|_|_|_|_|_|_|

(e) Other $ |_|_|_|_|_|_|_|

[32] Fees allocated to in-house lawyer $ |_|_|_|_|_|_|_|

[33] Additional information (check yes or no)

(a) Was claimant represented by counsel? Yes ☐ No ☐

(b) Was action commenced? Yes ☐ No ☐

[34] Date of receipt of the application for accident benefits (or proof of claim)

Disability Income Benefits YY |1|9|_|_| MM |_|_| DD |_|_|

Other Benefits YY |1|9|_|_| MM |_|_| DD |_|_|

[35] Date first cheque was issued:

Disability Income Benefits YY |1|9|_|_| MM |_|_| DD |_|_|

Other Benefits YY |1|9|_|_| MM |_|_| DD |_|_|

[36] IBC statistical territory code |1|0|_| of your insured vehicle.

[37] IBC class code (i.e., type of use code) |_|_| of your insured vehicle.

ACCIDENT BENEFITS CLAIMS SURVEY RESULTS

QUESTION 5 - YEAR OF ACCIDENT

	PRIVATE PASSENGER		OTHER	
NUMBER OF RECORDS	450	448	124	92
NUMBER USEABLE	450	448	124	92
	PRIVATE PASSENGER % accidents		OTHER % accidents	
DURING OR BEFORE 1984	1.3	0.2	2.4	1.1
DURING 1985	2.4	0.0	6.5	1.1
DURING 1986	18.7	0.9	18.5	0.0
DURING 1987	38.4	4.7	38.7	3.3
DURING 1988	39.1	20.1	33.9	20.7
DURING 1989	0.0	51.3	0.0	48.9
DURING 1990	0.0	22.8	0.0	25.0

QUESTION 6 - DAYS TILL CLAIM WAS REPORTED

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	530	498	137	95
NUMBER USEABLE	530	498	137	95
	PRIVATE PASSENGER % claimants		OTHER % claimants	
LESS THAN ONE WEEK	79.6	83.3	52.6	65.3
ONE WEEK	1.9	1.2	2.9	3.2
TWO WEEKS	5.8	4.8	14.6	11.6
THREE WEEKS	3.2	3.4	4.4	7.4
FOUR WEEKS	2.3	1.2	7.3	1.1
GREATER THAN FOUR WEEKS	7.2	6.0	18.2	11.6

QUESTION 7 - COVERAGES

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	450	448	125	92
NUMBER USEABLE	450	448	124	92
	PRIVATE PASSENGER % accidents		OTHER % accidents	
ACCIDENT BENEFITS	100.0	100.0	100.0	100.0
UNINSURED MOTORIST	0.0	0.0	0.8	0.0

QUESTION 8 - PLACE OF ACCIDENT

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	450	448	124	92
NUMBER USEABLE	450	448	124	92
	PRIVATE PASSENGER % accidents		OTHER % accidents	
ALBERTA	94.4	95.8	90.3	97.8
OTHER JUR. IN CANADA	4.7	2.5	8.9	2.2
U.S.A.	0.9	1.8	0.8	0.0

ACCIDENT BENEFITS CLAIMS SURVEY RESULTS

QUESTION 9 - CLAIMANT CATEGORY

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	530	498	137	95
NUMBER USEABLE	530	498	137	95
CLAIMANT CATEGORY	PRIVATE PASSENGER		OTHER	
	% claimants		% claimants	
DRIVER	64.9	72.1	74.5	82.1
PASSENGER (SPOUSE OF DRIVER)	7.0	7.0	4.4	1.1
PASSENGER (DEPENDENT CHILD)	3.2	3.2	1.5	2.1
PASSENGER OTHER	19.2	13.3	16.8	12.6
PED.OR CYCLIST	5.1	3.8	2.9	2.1
OTHER	0.6	0.6	0.0	0.0

QUESTION 10 - SEX OF CLAIMANT

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	530	498	137	95
NUMBER USEABLE	530	498	137	95
	PRIVATE PASSENGER		OTHER	
	% claimants		% claimants	
MALE	48.1	45.8	75.9	82.1
FEMALE	51.9	54.2	24.1	17.9

QUESTION 11 - AGE OF CLAIMANT

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	530	498	137	95
NUMBER USEABLE	460	462	125	85
	PRIVATE PASSENGER		OTHER	
	% claimants		% claimants	
LESS THAN 16 YRS	3.7	3.7	6.4	2.4
16 TO 24 YRS	13.7	20.1	17.6	23.5
25 TO 34 YRS	30.2	31.2	39.2	35.3
35 TO 44 YRS	24.1	21.6	20.0	15.3
45 TO 54 YRS	14.3	13.0	8.8	10.6
55 TO 64 YRS	7.8	5.6	2.4	2.4
MORE THAN 65 YRS	6.1	4.8	5.6	10.6

QUESTION 12 - ACCIDENT TYPE

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	450	448	124	92
NUMBER USEABLE	450	448	124	92
	PRIVATE PASSENGER		OTHER	
	% accidents		% accidents	
SINGLE VEHICLE	26.7	21.2	37.1	41.3
MULTIPLE VEHICLE	73.3	78.8	62.9	58.7

QUESTION 13 INSURED VEHICLE INVOLVED IN ACCIDENT

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	450	448	124	92
NUMBER USEABLE	450	448	124	92
	PRIVATE PASSENGER		OTHER	
	% accidents		% accidents	
INSURED VEHICLE INVOLVED	99.6	98.9	97.6	100.0

ACCIDENT BENEFITS CLAIMS SURVEY RESULTS

QUESTION 14 - TYPE OF VEHICLE INVOLVED - CLAIMANT AN OCCUPANT

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	530	498	137	95
NUMBER USEABLE	530	498	137	95
	PRIVATE PASSENGER		OTHER	
	% claimants		% claimants	
CAR	73.4	80.7	29.2	14.7
PICK-UP TRUCK	21.1	16.5	24.8	32.6
MOTORCYCLE	2.6	1.4	32.8	35.8
BUS	0.0	0.0	0.0	2.1
SNOW VEHICLE	0.0	0.0	3.6	2.1
ATV	0.2	0.2	2.2	2.1
HEAVY TRUCK	0.8	0.6	5.8	9.5
TAXI	0.0	0.0	1.5	1.1
OTHER	1.9	0.6	0.0	0.0

QUESTION 14 - OTHER VEHICLE INVOLVED

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	393	398	91	56
NUMBER USEABLE	393	398	91	56
	PRIVATE PASSENGER		OTHER	
	% claimants		% claimants	
CAR	71.0	67.3	78.0	73.2
PICK-UP TRUCK	23.2	25.9	18.7	19.6
MOTORCYCLE	0.3	0.5	1.1	0.0
BUS	0.0	0.5	0.0	1.8
SNOW VEHICLE	0.0	0.0	0.0	0.0
ATV	0.3	0.0	0.0	0.0
HEAVY TRUCK	3.8	4.0	1.1	5.4
TAXI	0.5	0.3	0.0	0.0
OTHER	1.0	1.5	1.1	0.0

QUESTION 15 - DEGREE OF FAULT OF DRIVER

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	450	448	124	92
NUMBER USEABLE	420	425	119	85
	PRIVATE PASSENGER		OTHER	
	% accidents		% accidents	
NONE	65.2	70.1	57.1	49.4
LESS THAN 100%	6.2	5.6	1.7	4.7
100%	28.6	24.2	41.2	45.9

QUESTION 15 - DEGREE OF FAULT OF PEDESTRIAN OR CYCLIST

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	530	498	137	95
NUMBER USEABLE	475	461	126	86
	PRIVATE PASSENGER		OTHER	
	% claimants		% claimants	
NONE	96.2	99.1	99.2	100.0
LESS THAN 100%	1.1	0.4	0.0	0.0
100%	2.7	0.4	0.8	0.0

ACCIDENT BENEFITS CLAIMS SURVEY RESULTS

QUESTION 15 - DEGREE OF FAULT OF OTHER

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	530	498	137	95
NUMBER USEABLE	469	460	126	86
	PRIVATE PASSENGER % claimants		OTHER % claimants	
NONE	98.7	98.7	98.4	98.8
LESS THAN 100%	0.4	0.2	0.0	0.0
100%	0.9	1.1	1.6	1.2

QUESTION 16 - DEGREE OF FAULT OF THIRD PARTY

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	530	498	137	95
NUMBER USEABLE	509	494	134	94
	PRIVATE PASSENGER % claimants		OTHER % claimants	
NONE	38.5	30.4	44.0	52.1
LESS THAN 100%	3.9	2.6	3.0	4.3
100%	57.6	67.0	53.0	43.6

QUESTION 17 - CLAIMANT HAD A B.I. LIABILITY CLAIM

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	530	498	137	95
NUMBER USEABLE	530	498	137	95
	PRIVATE PASSENGER % claimants		OTHER % claimants	
YES	30.4	32.7	28.5	29.5
NO	42.6	33.1	48.9	50.5
UNKNOWN	27.0	34.1	22.6	20.0

QUESTION 18 - THIRD PARTY HAD A B.I. LIABILITY CLAIM

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	530	498	137	95
NUMBER USEABLE	530	498	137	95
	PRIVATE PASSENGER % claimants		OTHER % claimants	
YES	12.6	10.8	6.6	6.3
NO	70.4	81.7	74.5	67.4
UNKNOWN	17.0	7.4	19.0	26.3

ACCIDENT BENEFITS CLAIMS SURVEY RESULTS

QUESTION 19 - NUMBER OF MONTHS TILL CLAIM WAS CLOSED

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	530	498	137	95
NUMBER USEABLE	530	498	137	95
	PRIVATE PASSENGER % claimants		OTHER % claimants	
LESS THAN 1 MONTH	9.1	7.8	8.0	7.4
UP TO 2 MONTHS	10.2	6.6	11.7	11.6
UP TO 3 MONTHS	9.4	6.2	8.8	6.3
UP TO 4 MONTHS	8.5	8.8	6.6	7.4
5 TO 6 MONTHS	11.5	11.8	6.6	12.6
7 TO 8 MONTHS	5.7	7.4	8.8	10.5
9 TO 10 MONTHS	6.6	6.8	5.8	8.4
11 TO 12 MONTHS	4.3	5.2	3.6	4.2
UP TO 18 MONTHS	15.1	17.7	14.6	10.5
18 TO 24 MONTHS	8.1	10.2	10.2	11.6
24 TO 36 MONTHS	9.6	9.0	11.7	6.3
36 TO 48 MONTHS	1.3	2.0	2.2	1.1
48 TO 60 MONTHS	0.4	0.0	0.7	1.1
MORE THAN 60 MONTHS	0.2	0.2	0.7	1.1

QUESTION 20 - CONDITION OF CLAIMANT

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	530	498	137	95
NUMBER USEABLE	530	498	137	95
	PRIVATE PASSENGER % claimants		OTHER % claimants	
DECEASED	5.1	4.2	8.8	9.5
INJURED	94.9	95.8	91.2	90.5

QUESTION 21 - INJURY OF PERMANENT NATURE

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	530	498	137	95
NUMBER USEABLE	530	498	137	95
	PRIVATE PASSENGER % claimants		OTHER % claimants	
NO	89.2	88.2	81.8	83.2
YES	8.3	6.0	15.3	11.6
MAYBE	2.5	5.8	2.9	5.3

QUESTION 22 - TYPE OF INJURY

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	530	498	137	95
NUMBER USEABLE	530	498	137	95
	PRIVATE PASSENGER % claimants		OTHER % claimants	
NONE				
NOMINAL VALUE (SHAKEN UP)	20.0	15.5	20.4	12.6
PSYCHOLOGICAL	0.6	0.6	0.0	1.1
BRAIN OR SPINAL COLUMN				
PARAPLEGIC OR QUADRAPLEGIC	0.2	0.0	1.5	1.1
OTHER	1.9	0.8	2.2	0.0
HEAD				
FRACTURE	1.7	1.0	2.2	2.1
CONCUSSION	6.6	7.2	3.6	10.5
FACE				
FRACTURE	0.9	0.6	0.0	1.1
LACERATION WITH SCAR	0.8	0.8	0.0	1.1
LACERATION NO SCAR	7.9	3.2	2.2	6.3

ACCIDENT BENEFITS CLAIMS SURVEY RESULTS

QUESTION 22 - TYPE OF INJURY continued

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
EYE				
PARTIAL LOSS OR LOSS OF USE	0.4	0.4	0.7	0.0
TOTAL LOSS OR LOSS OF USE OF	0.0	0.0	0.0	0.0
EARS				
PARTIAL LOSS OR LOSS OF USE	0.2	0.4	0.7	2.1
TOTAL LOSS OR LOSS OF USE OF	0.0	0.0	0.7	0.0
NOSE				
RESULTING IN DISFIGUREMENT	0.0	0.0	0.0	0.0
NO DISFIGUREMENT	1.3	0.6	0.7	2.1
TEETH AND JAW				
FRACTURE	2.1	1.4	1.5	5.3
LOSS OF TEETH	2.1	1.6	1.5	1.1
OTHER	3.8	5.2	1.5	0.0
VOICE AND LARYNX				
LOSS OF VOICE	0.2	0.0	0.0	0.0
OTHER	0.2	0.0	0.0	1.1
NECK				
SOFT TISSUE	40.8	51.2	19.0	17.9
VERTEBRAE\DISC FRACTURE	0.8	1.0	1.5	0.0
PSYCHOLOGICAL TRAUMA	1.1	2.6	0.0	1.1
BACK				
SOFT TISSUE	23.6	34.9	19.0	21.1
VERTEBRAE\DISC FRACTURE	2.1	0.8	5.8	1.1
PSYCHOLOGICAL TRAUMA	0.6	2.8	0.0	0.0
CHEST AND RIBS				
FRACTURE	3.2	1.8	3.6	6.3
OTHER	5.3	5.8	2.2	4.2
INTERNAL ORGANS				
SURGERY IS REQUIRED	0.6	0.6	0.0	1.1
OTHER	1.3	1.6	2.9	1.1
SHOULDER				
SOFT TISSUE	6.2	9.2	2.2	0.0
FRACTURE	0.9	1.0	2.9	5.3
LACERATION	0.2	0.2	0.0	2.1
OTHER	0.8	1.6	0.7	0.0
ARM AND HAND				
FRACTURE	2.3	1.2	3.6	5.3
LOSS OF ARM OR HAND	0.0	0.0	0.0	0.0
LOSS OF BOTH ARMS OR HANDS	0.0	0.0	0.0	0.0
LACERATION	0.8	0.8	2.9	1.1
LOSS OF FINGERS	0.0	0.0	0.0	0.0
OTHER	3.0	5.4	2.2	2.1
ELBOW				
FRACTURE	0.2	0.8	0.0	0.0
OTHER	0.6	1.0	0.7	1.1
WRIST				
FRACTURE	0.4	0.6	3.6	0.0
OTHER	0.9	0.6	0.7	0.0
PELVIS AND HIP				
FRACTURE	1.7	1.4	1.5	6.3
OTHER	1.7	1.4	1.5	3.2
LEG AND FOOT				
FRACTURE	3.8	2.2	5.8	7.4
LOSS OF LEG OR FOOT	0.4	0.0	0.7	1.1
LACERATION	1.3	0.6	0.7	3.2
LOSS OF BOTH LEGS OR FEET	0.0	0.0	0.0	0.0
OTHER	4.5	4.2	7.3	4.2
KNEE				
SOFT TISSUE	4.2	4.8	5.1	6.3
FRACTURE	0.9	0.2	0.7	0.0
OTHER	1.5	2.6	3.6	3.2
ANKLE				
FRACTURE	1.3	0.2	2.9	2.1
OTHER	1.3	1.0	1.5	3.2

ACCIDENT BENEFITS CLAIMS SURVEY RESULTS

QUESTION 23 - EMPLOYMENT STATUS

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	530	498	137	95
NUMBER USEABLE	530	498	137	95
	PRIVATE PASSENGER % claimants		OTHER % claimants	
EMPLOYED FULL-TIME	58.9	60.0	63.5	71.6
EMPLOYED PART-TIME	4.5	6.4	6.6	7.4
STUDENT - 16 AND OVER	5.8	5.4	4.4	3.2
RETIRED	4.2	3.6	0.7	0.0
UMEMPLOYED	6.8	5.6	3.6	3.2
HOMEMAKER	7.2	7.8	3.6	4.2
PRESCHOOLER	4.5	3.0	8.0	3.2
OTHER	8.1	8.0	9.5	7.4

QUESTION 24 - GROSS WEEKLY EMPLOYMENT INCOME

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	336	331	96	75
NUMBER USEABLE	210	200	61	52
	PRIVATE PASSENGER % claimants		OTHER % claimants	
LESS THAN $200	12.9	10.5	6.6	5.8
$201 TO $300	26.7	23.5	11.5	11.5
$301 TO $400	19.0	18.0	23.0	15.4
$401 TO $500	18.1	22.0	24.6	21.2
$501 TO $600	11.9	10.0	16.4	19.2
$601 TO $700	5.7	8.5	0.0	9.6
$701 TO 800	1.9	4.0	8.2	9.6
$801 TO $900	1.9	2.0	6.6	7.7
$901 TO $1000	1.9	1.0	1.6	0.0
MORE THAN $1000	0.0	0.5	1.6	0.0
AVERAGE $	396.7	418.6	485.6	509.8

QUESTION 24 - NUMBER OF MONTHS EMPLOYED PRECEDING ACCIDENT

	PRIVATE PASSENGER		OTHER	
NUMBER OF RECORDS	336	331	96	75
NUMBER USEABLE	278	277	75	57
	PRIVATE PASSENGER % claimants		OTHER % claimants	
LESS THAN 2 MONTHS	1.4	3.6	4.0	0.0
3 MONTHS	1.1	2.2	1.3	1.8
4 MONTHS	0.7	3.2	1.3	0.0
5 MONTHS	1.8	0.0	1.3	0.0
6 MONTHS	2.9	5.4	1.3	3.5
7 MONTHS	0.7	0.0	0.0	0.0
8 MONTHS	1.1	3.2	0.0	0.0
9 MONTHS	2.9	1.1	1.3	3.5
10 MONTHS	1.4	0.4	2.7	0.0
11 MONTHS	0.4	0.7	1.3	0.0
12 MONTHS	85.6	80.1	85.3	91.2

ACCIDENT BENEFITS CLAIMS SURVEY RESULTS

ACCIDENT BENEFITS CLAIMS SURVEY RESULTS

QUESTION 25 - ACTUAL TIME LOSS

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	530	498	137	95
NUMBER USEABLE	270	268	82	60
	PRIVATE PASSENGER		OTHER	
	% claimants		% claimants	
1 WEEK	20.7	23.9	18.3	8.3
2 WEEKS	13.0	10.8	6.1	11.7
3 WEEKS	11.9	9.3	7.3	23.3
4 WEEKS	3.0	3.4	1.2	5.0
2 MONTHS	19.6	21.6	19.5	28.3
3 MONTHS	10.4	8.6	14.6	5.0
4 MONTHS	7.0	8.6	11.0	1.7
5 MONTHS	3.7	3.4	3.7	1.7
6 MONTHS	2.2	3.0	12.2	3.3
7 MONTHS	1.1	1.5	1.2	1.7
8 MONTHS	0.4	1.5	0.0	1.7
9 MONTHS	1.5	0.7	2.4	0.0
10 MONTHS	0.7	0.7	0.0	0.0
11 MONTHS	0.4	0.0	0.0	1.7
12 MONTHS	0.4	0.0	0.0	0.0
2 YEARS	0.4	0.4	0.0	0.0
3 YEARS	0.0	0.0	0.0	0.0
4 YEARS	0.0	0.0	0.0	0.0
5 YEARS	0.0	0.0	0.0	0.0
PERMANENT	3.7	2.6	2.4	6.7

QUESTION 26 - PAYMENTS MADE TO CLAIMANTS FOR UNINSURED MOTORISTS - B.I.

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	530	498	137	95
NUMBER USEABLE	0	1	3	0
AVERAGE AMT	0	11136	79655	0

QUESTION 26 - PAYMENTS MADE TO CLAIMANTS FOR UNINSURED MOTORISTS - P.D.

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	530	498	137	95
NUMBER USEABLE	1	0	0	0
	PRIVATE PASSENGER		OTHER	
AVERAGE AMT	43466	0	0	0

ACCIDENT BENEFITS CLAIMS SURVEY RESULTS

QUESTION 27 - TOTAL SECTION B BENEFITS PAYMENT
CLOSED IN 1988

	PRIVATE PASSENGER	OTHER
NUMBER OF RECORDS	530	137
NUMBER USEABLE	530	137

	PRIVATE PASSENGER		OTHER	
	%$	% claimants	%$	% claimants
LESS THAN $1,000	11.1	65.5	4.4	48.2
$1,001 TO $2,000	10.6	13.2	7.3	16.1
$2,001 TO $3,000	9.2	6.4	3.7	5.1
$3,001 TO $4,000	4.8	2.5	5.3	5.1
$4,001 TO $5,000	7.4	2.8	2.8	2.2
$5,001 TO $6,000	6.5	2.1	6.2	3.6
$6,001 TO $7,000	5.5	1.5	5.7	2.9
$7,001 TO $8,000	1.7	0.4	1.7	0.7
$8,001 TO $9,000	1.8	0.4	3.7	1.5
$9,001 TO $10,000	2.0	0.4	2.0	0.7
$10,001 TO $15,000	22.4	3.2	30.7	8.8
$15,001 TO $20,000	14.9	1.5	26.6	5.1
$20,001 TO $25,000	2.2	0.2	0.0	0.0
$25,001 TO $50,000	0.0	0.0	0.0	0.0
$50,001 TO $75,000	0.0	0.0	0.0	0.0
$75,001 TO $100,000	0.0	0.0	0.0	0.0
$100,001 TO $200,000	0.0	0.0	0.0	0.0
$200,001 TO $300,000	0.0	0.0	0.0	0.0
$300,001 TO $400,000	0.0	0.0	0.0	0.0
$400,001 TO $500,000	0.0	0.0	0.0	0.0
MORE THAN $500,000	0.0	0.0	0.0	0.0

Note: %$ means percentage of total paid to claimants in each band
Note: %claimants means percentage of claimants in each band

QUESTION 27 - SECTION B BENEFITS
CLOSED IN 1988

	PRIVATE PASSENGER	OTHER
NUMBER OF RECORDS	530	137
NUMBER USEABLE	530	137

	PRIVATE PASSENGER		OTHER	
	% total $	% claimants	% total $	% claimants
MEDICAL	25.8	81.1	13.9	80.3
LONG TERM CARE	0.0	0.0	0.0	0.0
CHRIOPACTOR	1.3	3.4	0.2	2.2
REHABILITION	0.6	2.5	0.0	2.2
VOCATIONAL TRAINING	0.0	0.0	0.0	0.0
FUNERAL	2.6	5.1	2.4	8.8
DEATH-PRINCIPAL SUM	8.7	4.3	12.7	8.8
DEATH- SURVIVOR BENEFIT	7.6	4.5	12.7	8.8
DISABILITY- EMPLOYED	52.6	34.7	55.2	46.7
DISABILITY- SPOUSAL	0.2	0.8	0.1	0.7
OTHER	0.5	5.5	2.7	3.6

ACCIDENT BENEFITS CLAIMS SURVEY RESULTS

QUESTION 27 - SECTION B BENEFIT - CLOSED IN 1988

	PRIVATE PASSENGER	OTHER
NUMBER OF RECORDS	530	137
NUMBER USEABLE	530	137

	PRIVATE PASSENGER AVERAGE AMT	OTHER AVERAGE AMT
MEDICAL	557	578
LONG TERM CARE	0	0
CHRIOPACTOR	647	296
REHABILITION	447	58
VOCATIONAL TRAINING	0	0
FUNERAL	909	917
DEATH-PRINCIPAL SUM	3509	4840
DEATH- SURVIVOR BENEFIT	2949	4833
DISABILITY- EMPLOYED	2652	3948
DISABILITY- SPOUSAL	530	650
OTHER	169	2487

QUESTION 27 - TOTAL SECTION B BENEFITS PAYMENT CLOSED IN 1990

	PRIVATE PASSENGER	OTHER
NUMBER OF RECORDS	498	95
NUMBER USEABLE	498	95

	PRIVATE PASSENGER		OTHER	
	%$	% claimants	%$	% claimants
LESS THAN $1,000	9.7	63.7	10.8	58.9
$1,001 TO $2,000	10.7	14.3	11.1	16.8
$2,001 TO $3,000	8.4	6.6	12.6	11.6
$3,001 TO $4,000	9.0	4.8	0.0	0.0
$4,001 TO $5,000	6.2	2.6	0.0	0.0
$5,001 TO $6,000	4.3	1.4	5.4	2.1
$6,001 TO $7,000	2.8	0.8	3.3	1.1
$7,001 TO $8,000	1.6	0.4	0.0	0.0
$8,001 TO $9,000	2.7	0.6	0.0	0.0
$9,001 TO $10,000	5.1	1.0	4.7	1.1
$10,001 TO $15,000	12.2	2.0	32.5	6.3
$15,001 TO $20,000	9.2	1.0	0.0	0.0
$20,001 TO $25,000	2.2	0.2	19.6	2.1
$25,001 TO $50,000	2.7	0.2	0.0	0.0
$50,001 TO $75,000	13.3	0.4	0.0	0.0
$75,001 TO $100,000	0.0	0.0	0.0	0.0
$100,001 TO $200,000	0.0	0.0	0.0	0.0
$200,001 TO $300,000	0.0	0.0	0.0	0.0
$300,001 TO $400,000	0.0	0.0	0.0	0.0
$400,001 TO $500,000	0.0	0.0	0.0	0.0
MORE THAN $500,000	0.0	0.0	0.0	0.0

QUESTION 27 CONTINUED - CLOSED IN 1990

	PRIVATE PASSENGER	OTHER
NUMBER OF RECORDS	498	95
NUMBER USEABLE	498	95

	PRIVATE PASSENGER		OTHER	
	% total $	% claimants	% total $	% claimants
MEDICAL	35.3	74.7	18.0	75.8
LONG TERM CARE	0.5	0.4	1.3	3.2
CHRIOPACTOR	1.8	9.2	1.1	9.5
REHABILITION	1.3	4.0	0.0	0.0
VOCATIONAL TRAINING	0.0	0.0	0.2	1.1
FUNERAL	2.7	4.2	4.3	9.5
DEATH-PRINCIPAL SUM	8.4	3.2	11.9	7.4
DEATH- SURVIVOR BENEFIT	7.2	3.2	15.7	8.4
DISABILITY- EMPLOYED	40.0	32.3	46.4	44.2
DISABILITY- SPOUSAL	0.7	1.4	0.5	1.1
OTHER	2.1	9.8	0.8	5.3

ACCIDENT BENEFITS CLAIMS SURVEY RESULTS

QUESTION 27 - SECTION B BENEFITS
CLOSED IN 1990

	PRIVATE PASSENGER	OTHER
NUMBER OF RECORDS	498	95
NUMBER USEABLE	498	95
	PRIVATE PASSENGER AVERAGE AMT	OTHER AVERAGE AMT
MEDICAL	895	525
LONG TERM CARE	2246	885
CHRIOPACTOR	373	246
REHABILITION	634	0
VOCATIONAL TRAINING	0	395
FUNERAL	1223	1000
DEATH-PRINCIPAL SUM	4938	3572
DEATH- SURVIVOR BENEFIT	4229	4125
DISABILITY- EMPLOYED	2348	2325
DISABILITY- SPOUSAL	994	1050
OTHER	401	325

QUESTION 28 - GOVERNMENT PLAN - U.I.C. - WEEKLY BENEFIT

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	530	498	137	95
NUMBER USEABLE	5	3	1	1
AVERAGE SIZE	213.2	202.3	265.0	318.0

QUESTION 28 - GOVERNMENT PLAN - U.I.C. - DURATION (WEEKS)

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	530	498	137	95
NUMBER USEABLE	6	3	1	1
AVERAGE DURATION	10.2	20.7	1.0	15.0

QUESTION 28 - GOVERNMENT PLAN - U.I.C. - TOTAL BENEFIT

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	530	498	137	95
NUMBER USEABLE	6	3	1	1
AVERAGE BENEFIT	2296.8	4259.0	265.0	4770.0

ACCIDENT BENEFITS CLAIMS SURVEY RESULTS

QUESTION 29 - EMPLOYER SPONSORED - WEEKLY BENEFIT

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	530	498	137	95
NUMBER USEABLE	33	26	7	6
AVERAGE SIZE	381.1	353.7	417.4	1045.0

QUESTION 29 - EMPLOYER SPONSORED - DURATION (WEEKS)

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	530	498	137	95
NUMBER USEABLE	33	27	7	6
AVERAGE DURATION	17.6	14.8	15.0	16.3

QUESTION 29 - EMPLOYER SPONSORED - TOTAL BENEFIT

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	530	498	137	95
NUMBER USEABLE	33	27	7	6
AVERAGE BENEFIT	5846.1	5991.0	5297.1	10394.5

QUESTION 30 - PERSONAL INSURANCE - WEEKLY BENEFIT

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	530	498	137	95
NUMBER USEABLE	6	0	1	1
AVERAGE SIZE	279.5	0.0	538.0	320.0

QUESTION 30 - PERSONAL INSURANCE - DURATION (WEEKS)

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	530	498	137	95
NUMBER USEABLE	6	0	1	1
AVERAGE DURATION	14.0	0.0	1.0	5.0

QUESTION 30 - PERSONAL INSURANCE - TOTAL BENEFIT

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	530	498	137	95
NUMBER USEABLE	7	0	1	1
AVERAGE BENEFIT	5897.6	0.0	538.0	1570.0

ACCIDENT BENEFITS CLAIMS SURVEY RESULTS

QUESTION 31 - BREAKDOWN OF INTERNAL EXPENSES

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	530	498	137	95
NUMBER USEABLE	141	119	141	29
	PRIVATE PASSENGER		OTHER	
		AVG. SIZE		AVG. SIZE
FEES PAID TO OUTSIDE LAWYER	1260	5562	1171	2714
FEES PAID TO INDEP. ADJUSTER	672	643	745	598
FEES PAID TO DEFENSE MEDICAL	385	444	35	261
FEES PAID TO OTHER EXPERTS	668	469	733	525
OTHER	71	202	5	0

QUESTION 32 - FEES ALLOCATED TO IN-HOUSE LAWYER

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	530	498	137	95
NUMBER USEABLE	2	2	3	1
	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
AVERAGE AMOUNT	1762	1344	5699	1020

QUESTION 33 - ADDITIONAL INFORMATION

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	530	498	137	95
NUMBER USEABLE	530	498	137	95
	PRIVATE PASSENGER		OTHER	
	% claimants		% claimants	
REPRESENTED BY COUNSEL	19.1	23.1	19.0	17.9
ACTION COMMENCED	3.2	6.0	7.3	3.2

QUESTION 34 - DAYS TILL APPLICATION FOR ACCIDENT BENEFITS RECEIVED

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	530	498	137	95
NUMBER USEABLE	530	498	137	95

	PRIVATE PASSENGER		OTHER	
	% claimants		% claimants	
LESS THAN ONE WEEK	18.7	16.5	13.9	17.9
ONE WEEK	0.8	1.4	2.2	1.1
TWO WEEKS	6.6	8.2	2.9	7.4
THREE WEEKS	8.3	8.8	8.8	10.5
FOUR WEEKS	7.2	6.2	7.3	8.4
TWO MONTHS	20.9	21.5	25.5	22.1
THREE MONTHS	11.3	9.2	16.1	10.5
FOUR MONTHS	8.5	7.0	6.6	7.4
FIVE MONTHS	2.8	5.4	5.1	1.1
SIX MONTHS	2.5	3.2	1.5	1.1
GREATER THAN SIX MONTHS	12.5	12.4	10.2	12.6

ACCIDENT BENEFITS CLAIMS SURVEY RESULTS

QUESTION 35 - DAYS TILL FIRST CHEQUE WAS ISSUED FROM APPLICATION DATE

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	530	498	137	95
NUMBER USEABLE	530	498	137	95
	PRIVATE PASSENGER % claimants		OTHER % claimants	
LESS THAN ONE WEEK	53.2	50.2	43.1	47.4
ONE WEEK	1.7	1.0	1.5	2.1
TWO WEEKS	5.3	5.2	5.8	8.4
THREE WEEKS	7.4	9.2	6.6	5.3
FOUR WEEKS	3.6	6.6	8.8	3.2
TWO MONTHS	16.6	11.2	11.7	20.0
THREE MONTHS	4.2	4.2	8.0	6.3
FOUR MONTHS	1.7	3.4	3.6	2.1
FIVE MONTHS	0.8	2.4	1.5	1.1
SIX MONTHS	0.6	1.8	0.7	0.0
GREATER THAN SIX MONTHS	5.1	4.6	8.8	4.2

QUESTION 35 - DAYS TILL FIRST CHEQUE WAS ISSUED FROM ACCIDENT DATE

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	530	498	137	95
NUMBER USEABLE	530	498	137	95
	PRIVATE PASSENGER % claimants		OTHER % claimants	
LESS THAN ONE WEEK	6.0	5.2	4.4	6.3
ONE WEEK	0.4	1.4	0.0	1.1
TWO WEEKS	2.1	3.2	0.7	1.1
THREE WEEKS	5.7	5.8	1.5	7.4
FOUR WEEKS	5.7	5.8	6.6	5.3
TWO MONTHS	27.4	25.3	26.3	29.5
THREE MONTHS	15.3	14.3	16.8	13.7
FOUR MONTHS	10.6	7.2	13.1	12.6
FIVE MONTHS	5.7	8.2	6.6	4.2
SIX MONTHS	3.8	4.0	4.4	3.2
GREATER THAN SIX MONTHS	17.5	19.5	19.7	15.8

QUESTION 36 - IBC STATISTICAL TERRITORY

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	450	448	124	92
NUMBER USEABLE	448	448	124	92
	PRIVATE PASSENGER % accidents		OTHER % accidents	
MED. HAT,RED DEER	30.0	35.9	34.7	34.8
CALGARY	30.2	29.5	25.8	25.0
EDMONTON	35.6	32.1	38.7	34.8
NORTHERN DISTRICT	3.8	2.5	0.8	5.4

APPENDIX 3

CONFIDENTIAL

REPORT ON COSTING OF COMPENSATION SCHEME ALTERNATIVES FOR ALBERTA

Prepared by:

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27 August 1991

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INTRODUCTION

We were retained by the Alberta Automobile Insurance Board to examine potential reduction in cost of the following compensation scheme alternatives.

Under the first alternative (Option 1), all injured persons retain the right to sue; however, there is a $10,000 deductible on all non-pecuniary damage awards (ceiling increased to $300,000). Accident benefits are modestly enriched. Total disability benefits (income replacement) are prorated whenever the total benefits under all contracts exceed the normal income.

Under the second alternative, all injured persons retain the right to sue; however, there is a $10,000 deductible on all non-pecuniary damage awards (ceiling increased to $300,000). Accident benefits are substantially enriched. Total disability benefits (income replacement) are costed both primary (Option 2p) and secondary (Option 2s) to other sources.

Under the third alternative, recovery through tort (the right to sue) is limited to those cases where the level of bodily injury/impairment exceeds a defined threshold. Accident benefits are substantially enriched. Total disability benefits (income replacement) are costed both primary (Option 3p) and secondary (Option 3s) to other sources.

In determining the cost of the compensation scheme alternatives (five options in total), we were asked to calculate the loss cost (per vehicle) for the following enriched accident benefits (no-fault benefits) and tort reform measures.

I. Accident Benefits

1. Medical

Option 1:

Reasonable and essential expenses, excess of Alberta Health Care Insurance, up to $25,000 per person within 2 years.

Options 2p, 2s, 3p, & 3s:

Coverage up to a maximum of $500,000 would be available for medical and rehabilitation benefits over the greater of 10 years or 20 years less the age of the victim at the time of the accident. Long term care up to a maximum of $500,000 over the life of the victim.

2. Death Benefits

Option 1:

Principal Sum Age of Deceased at Date of Accident	Head of Household	Spouse in Two-Parent Household	Dependent Relative
Up to age of 4 years	---	---	2,000
5 to 9 years	---	---	2,000
10 to 17 years	10,000	10,000	2,000
18 to 64 years	10,000	10,000	2,000
65 to 69 years	10,000	10,000	2,000
70 years and over	10,000	10,000	2,000

In addition, with respect to the death of head of household,

a. Where there are two or more survivors, being spouse and/or dependent relatives, the principal sum payable is increased by 10% for each survivor other than the first; and

b. Where there are one or more survivors, being spouse and/or dependent relatives, 1% of the total principal sum payable each week for a period of 104 weeks. Any weekly benefit shall terminate upon death of all such survivors.

Options 2 & 3:

(a) The death of the head of household or spouse results in a payment of $25,000 plus an additional sum of $10,000 for each other survivor.

(b) The death of a dependent results in a payment of $10,000.

3. Funeral Expense

Options 1, 2p, 2s, 3p, & 3s:

Up to $3,000 per claimant fatally injured in accident.

4.A Disability Benefit -- wage earners and deemed to be employed.

Option 1:

75% of average gross weekly earnings subject to a maximum benefit of $500 payable for a maximum of 104 weeks. There is 7 day waiting period. The benefit payable is reduced where other benefits for loss of time are payable. The insurer is liable only for that proportion of benefits for loss of time that the money value of the time of the person insured bears to the aggregate of the benefits for loss of time payable under all such contracts.

Options 2p & 3p:

75% of average gross weekly earnings subject to a maximum benefit of $500 payable for life. There is 7 day waiting period for employed claimants and a 60 day waiting period for deemed to be employed claimants. The benefits payable are primary to other sources of income replacement.

Options 2s & 3s:

75% of average gross weekly earnings subject to a maximum benefit of $500 payable for life. There is 7 day waiting period for employed claimants and a 60 day waiting period for deemed to be employed claimants. The benefits payable are secondary to other sources of income replacement (except UIC).

4.B Disability Benefit -- students.

Option 1:

None.

Options 2p, 2s, 3p & 3s:

(a) Until deemed eligible to enter the work force, a lump sum yearly payment of:

- (i) $1,000 per year lost at the elementary school level
- (ii) $2,000 per year lost at the secondary school level
- (iii) $4,000 per year lost at the post-secondary school level.

(b) A student with a lengthy disability will be eligible to receive a weekly benefit if, at the time of the accident:

- (i) he is attending elementary school and attaining age nineteen (19) while still disabled
- (ii) he is attending secondary school and attaining age nineteen (19) while still disabled
- (iii) he is attending a post-secondary institution and attaining age twenty-three (23) while still disabled

at which time he/she will receive a weekly benefit of $340 per week.

4.C Disability Benefit -- home care.

Option 1:

A weekly benefit of $70 per week for not more than 26 weeks if completely incapacitated and unable to perform any of his/her duties.

Options 2p, 2s, 3p, & 3s:

A weekly benefit payable on the basis of reasonable expenses incurred up to a maximum of $50 per week of disability.

4.D Disability Benefit -- childcare:

Option 1:

None.

Options 2p, 2s, 3p, & 3s:

A weekly benefit of $200 plus an additional $50 per week per child/dependent, subject to a maximum of $350 per week, would be payable for child care expenses when the person normally providing the child care was disabled.

5. Other.

6. Uninsured motorist coverage.

II. 1. Tort Reforms

Options 1, 2p, & 2s:

$10,000 deductible on all non-pecuniary damage awards and increase ceiling to $300,000.

Options 3p & 3s:

Tort litigation beyond no-fault benefits subject to threshold

(a) death, or
(b) permanent serious disfigurement; or
(c) permanent serious impairment of an important bodily function, caused by continuing injury which is physical in nature.

2. Property Damage and SEF44

III. Reduction in Liability Claims Cost as an offset to Accident Benefit Enhancements.

SUMMARY

The objective of this report is to determine the relative costs of the various compensation schemes proposed and the potential reduction in cost (over the current system) associated with each.

We have examined the various compensation schemes proposed. All alternatives have higher first party benefits than the current accident benefits. Some of the options require some restriction of tort right (via a verbal threshold) while the rest impose a deductible on all non-pecuniary damage awards.

We concluded that the reduction in claims cost of the compulsory coverage (plus SEF 44) are as follows:

	Reduction @7/90 per Vehicle $
Option 1	32
Option 2p (primary)	24
Option 2s (secondary)	27
Option 3p (primary)	65
Option 3s (secondary)	72

	Reduction @1/92 per Vehicle $
Option 1	37
Option 2p (primary)	29
Option 2s (secondary)	32
Option 3p (primary)	77
Option 3s (secondary)	85

LIMITATIONS

Future claim costs may vary significantly from our estimates due to the change in the delivery mechanism or different utilization rate.

While we have tried to verify all our assumptions, it is not always possible. In certain cases, we have to rely on our best judgment.

Not all of our assumptions should be considered equally reliable. With respect to tort reform, we have assumed that the $10,000 non-pecuniary loss deductible and increased ceiling (to $300,000) will result in a 20% exaggeration of claim amount (before deductible). This may or may not be true. We have assumed that all severely injured persons would consume the policy limit on future care expense under certain options. This is probably not true.

We have employed detailed claimant data from the Alberta Claims survey. We believe it is the best information available. However, there is always some sampling error when one uses a small percentage of the population.

METHODOLOGY

Our methodology assumes that the 1990 discounted loss cost is representative of the current cost if no change in the policy is made. Total current accident benefits cost is allocated to each benefit based on the distribution found in the Accident Benefits Claims Survey. Each model is costed based on the proposed changes in accident benefits and tort reform measures.

Whenever possible, each claimant in the Alberta Claims Survey is subjected to a policy change and the aggregate result of all claimants in the sample is compared against the actual figure to arrive at a percentage of actual. This percentage (of actual) is applied to the 1990 discounted loss cost to arrive at the cost of the proposed benefit. Whenever possible, change in average claim size and change in frequency are estimated separately.

When it is not practical to analyze each claimant individually, total industry data is used.

The details of each proposed change in accident benefits and tort reform measures can be found in the appendix.

DATA AND RELIANCE

We have performed our analysis relying on the following data.

1) Alberta Bodily Injury Claims Survey Database.

2) Alberta Accident Benefits Claims Survey Database.

3) Report of Inquiry in Motor Vehicle Accident Compensation in Ontario; Hon. Mr. Justice Coulter A. Osborne.

4) 1983-1985 IBC data.

5) IBC Submission to the Inquiry into Motor Vehicle Accident Compensation in Ontario (the Osborne Commission).

6) 1969-1975 CIA Mortality Table.

7) Alberta Traffic Collision Statistics 1989

8) Letter to Ms. Susan Steeves from IBC re:¯ lost cost per car 1983 to 1990

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A. Derivation of Current Loss Cost

B. Comparison of Discounted Loss Costs for each Compensation Scheme

C. Detailed Analysis by Section:

I 1. Medical/rehabilitation, future care

2. Death benefit

3. Funeral expense

4. Disability benefit

A wage earners and deemed to be employed

B students

C house care

D child care

5. Other

6. Uninsured motorist coverage

II 1. Residual Bodily Injury Liability Loss Costs

2. Property Damage and SEF 44

III Reduction in Liability as an Offset to Accident
Benefits Enhancements

APPENDIX A

DERIVATION OF CURRENT LOSS COST

Derivation of Current Loss Cost by Head of Damage

Based on 1990, accident year industry data, we have:

Coverage	Loss Cost
Bodily Injury	189.43
Property Damage	87.99
Accident Benefits (excl. U.M.)	13.98
Uninsured Motorists (U.M.)	1.00
SEF 44	5.60
Total	298.00

Based on the last eight years of industry data, we fitted the loss cost by year exponentially. We concluded the annual trend in loss cost by coverage is as follows:

Coverage	Annual Trend
Bodily Injury	11.0%
Property Damage	5.0%
Accident Benefits	9.0%
Uninsured Motorists	11.0% *
SEF 44	11.0% *

* assumed to be same as Bodily Injury.

Based on the Alberta Accident Benefits Claims Survey database, we found:

Accident Benefit	% of Cost	Disability Benefit	% of Cost
Medical	38.9%	Wage Earner	86.0%
Death	15.6%	Deemed Employed	4.1%
Funeral	2.7%	Student	nil
Disability	40.7%	Housecare	9.9%
Other	2.1%	Childcare	nil
Total	100%	Total	100%

Benefit		Discount Factor
Medical		.7794[1]
Funeral		.9343[2]
Death		.9343[2]
Disability -	Wage Earner	.7794[1]
	Deemed Employed	.7794[1]
	Student	.7794[1]
	Housecare	.7794[1]
	Childcare	.7794[1]
Other		.7794[1]
Total No-Fault		n/a
Uninsured Motorist -	B.I.	.7739[2]
	- P.D.	n/a
Total Accident Benefits		.8055[2]
Bodily Injury		
	(excluding expense)	.7739[2]
B.I. Claim Adjustment Expense		.7739[2]
Offset from Higher A.B.		n/a
Total Bodily Injury		.7739[2]
Property Damage		1.000
SEF 44		.7739[2]
Total Complusory Section		n/a

[1] Computed to balance.

[2] Based on IBC submission to the Osborne Commission.

Thus, in aggregate, we have:

Derivation of Current Discounted Loss Costs @7/90

Benefit		(a) **Current Cost @7/90**	(b) **Discount Factor**	(c) **Current Cost @7/90**	
Medical		5.44[1]	.7794	4.24	
Funeral			0.38[2]	.9343	0.36
Death		2.18[3]	.9343	2.04	
Disability -	Wage Earner	4.89[4]	.7794	3.81	
	Deemed Employed	0.23[5]	.7794	0.18	
	Student	nil	.7794	nil	
	Housecare	0.57[6]	.7794	0.44	
	Childcare	nil	.7794	nil	
Other		0.29[7]	.7794	0.23	
Total No-Fault		13.98	n/a	11.30	
Uninsured Motorist	- B.I.	1.00	.7739	0.77	
	- P.D.	nil	n/a	nil	
Total Accident Benefits			14.98	.8055	12.07
Bodily Injury (excluding expense)		164.80[8]	.7739	127.54	
B.I. Claim Adjustment Expense		24.63[9]	.7739	19.06	
Offset from Higher A.B.		n/a	n/a	n/a	
Total Bodily Injury		189.43	.7739	146.60	
Property Damage		87.99	1.0000	87.99	
SEF 44		5.60	.7739	4.33	
Total Complusory Section (plus SEF 44)		298.00	n/a	250.99	

[1] $5.44 = 38.9% x $13.98
[2] $0.38 = 2.7% x $13.98
[3] $2.18 = 15.6% x $13.98
[4] $4.89 = 40.7% x 86.0% x $13.98
[5] $0.23 = 40.7% x 4.1% x 13.98
[6] $0.57 = 40.7% x 9.9% x $13.98
[7] $0.29 = 2.1% x $13.98
[8] $164.80 = 87% x $189.43
[9] $24.63 = 13% x $189.43

Derivation of Current Discounted Loss Costs @1/92

Benefit		**Discounted Cost @7/90**	**Trend Factor**	**Discounted Cost @1/92**	
Medical		4.24	1.1380	4.83	
Funeral			0.36	1.1380	0.41
Death		2.04	1.1380	2.32	
Disability -	Wage Earner	3.81	1.1380	4.34	
	Deemed Employed	0.18	1.1380	0.20	
	Student	nil	1.1380	nil	
	Housecare	0.44	1.1380	0.50	
	Childcare	nil	1.1380	nil	
Other		0.23	1.1380	0.26	
Total No-Fault		11.30	n/a	12.86	
Uninsured Motorist	- B.I.	0.77	1.1380	0.88	
	- P.D.	nil	nil	nil	
Total Accident Benefits			12.07	1.1380	13.74
Bodily Injury (excluding expense)		127.54	1.1695	149.15	
B.I. Claim Adjustment Expense		19.06	1.1695	22.29	
Offset from Higher A.B.		n/a	n/a	n/a	
Total Bodily Injury		146.60	1.1695	171.44	
Property Damage		87.99	1.0759	94.67	
SEF 44		4.33	1.1695	5.06	
Total Complusory Section (plus SEF 44)		250.99	n/a	284.91	

APPENDIX B

COMPARISON OF DISCOUNTED LOSS COSTS FOR EACH COMPENSATION SCHEME

Comparison of Discounted Loss Costs --- Option 1

Benefit		**Current Policy @7/90**	**Proposed Policy @7/90**	**Current Policy @1/92**	**Proposed Policy @1/92**
Medical		4.24	6.36	4.83	7.24
Funeral			0.36	1.08	0.411.23
Death		2.04	3.80	2.32	4.32
Disability -	Wage Earner	3.81	8.45	4.34	9.62
	Deemed Employed	0.18	0.40	0.20	0.46
	Student	nil	nil	nil	nil
	Housecare	0.44	0.61	0.50	0.69
	Childcare	nil	nil	nil	nil
Other		0.23	0.23	0.26	0.26
Total No-Fault		11.30	20.93	12.86	23.82
Uninsured Motorist	- B.I.	0.77	0.56	0.88	0.64
	- P.D.	nil	nil	nil	nil
Total Accident Benefits			12.07	21.49	13.7424.46
Bodily Injury (excluding expense)		127.54	93.21	149.15	109.01
B.I. Claim Adjustment Expense		19.06	19.06	22.29	22.29
Offset from Higher A.B.		n/a	(6.59)	n/a	(7.50)
Total Bodily Injury		146.60	105.68	171.44	123.80
Property Damage		87.99	87.99	94.67	94.67
SEF 44		4.33	4.33	5.06	5.06
Total Complusory Section (plus SEF 44)		250.99	219.49	284.91	247.99
Reduction in Cost			31.50		36.92

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Comparison of Discounted Loss Costs --- Option 2p

Benefit		**Current Policy @7/90**	**Proposed Policy @7/90**	**Current Policy @1/92**	**Proposed Policy @1/92**
Medical		4.24	12.00	4.83	13.66
Funeral			0.36	1.08	0.411.23
Death		2.04	11.63	2.32	13.23
Disability -	Wage Earner	3.81	22.30	4.34	25.38
	Deemed Employed	0.18	0.53	0.20	0.60
	Student	nil	1.25	nil	1.42
	Housecare	0.44	1.18	0.50	1.34
	Childcare	nil	1.32	nil	1.50
Other		0.23	0.23	0.26	0.26
Total No-Fault		11.30	51.52	12.86	58.63
Uninsured Motorist	- B.I.	0.77	0.56	0.88	0.64
	- P.D.	nil	nil	nil	nil
Total Accident Benefits			12.07	52.08	13.7459.27
Bodily Injury (excluding expense)		127.54	93.21	149.15	109.01
B.I. Claim Adjustment Expense		19.06	19.06	22.29	22.29
Offset from Higher A.B.		n/a	(28.01)	n/a	(31.87)
Total Bodily Injury		146.60	84.26	171.44	99.43
Property Damage		87.99	87.99	94.67	94.67
SEF 44		4.33	2.17	5.06	2.54
Total Complusory Section (plus SEF 44)		250.99	226.50	284.91	255.91
Reduction in Cost			24.49		29.00

Comparison of Discounted Loss Costs --- Option 2s

Benefit		**Current Policy @7/90**	**Proposed Policy @7/90**	**Current Policy @1/92**	**Proposed Policy @1/92**
Medical		4.24	12.00	4.83	13.66
Funeral			0.36	1.08	0.411.23
Death		2.04	11.63	2.32	13.23
Disability -	Wage Earner	3.81	13.86	4.34	15.77
	Deemed Employed	0.18	0.53	0.20	0.60
	Student	nil	1.25	nil	1.42
	Housecare	0.44	1.18	0.50	1.34
	Childcare	nil	1.32	nil	1.50
Other		0.23	0.23	0.26	0.26
Total No-Fault		11.30	43.08	12.86	49.02
Uninsured Motorist	- B.I.	0.77	0.56	0.88	0.64
	- P.D.	nil	nil	nil	nil
Total Accident Benefits			12.07	43.64	13.7449.66
Bodily Injury (excluding expense)		127.54	93.21	149.15	109.01
B.I. Claim Adjustment Expense		19.06	19.06	22.29	22.29
Offset from Higher A.B.		n/a	(22.10)	n/a	(25.14)
Total Bodily Injury		146.60	90.17	171.44	106.16
Property Damage		87.99	87.99	94.67	94.67
SEF 44		4.33	2.17	5.06	2.54
Total Complusory Section (plus SEF 44)		250.99	223.97	284.91	253.03
Reduction in Cost			27.02		31.88

Comparison of Discounted Loss Costs --- Option 3p

Benefit		Current Policy @7/90	Proposed Policy @7/90	Current Policy @1/92	Proposed Policy @1/92
Medical		4.24	12.00	4.83	13.66
Funeral			0.36	1.08	0.411.23
Death		2.04	11.63	2.32	13.23
Disability -	Wage Earner	3.81	22.30	4.34	25.38
	Deemed Employed	0.18	0.53	0.20	0.60
	Student	nil	1.25	nil	1.42
	Housecare	0.44	1.18	0.50	1.34
	Childcare	nil	1.32	nil	1.50
Other		0.23	0.23	0.26	0.26
Total No-Fault		11.30	51.52	12.86	58.63
Uninsured Motorist	- B.I.	0.77	0.28	0.88	0.32
	- P.D.	nil	nil	nil	nil
Total Accident Benefits			12.07	51.80	13.7458.95
Bodily Injury (excluding expense)		127.54	46.81	149.15	54.74
B.I. Claim Adjustment Expense		19.06	7.00	22.29	8.19
Offset from Higher A.B.		n/a	(10.21)	n/a	(11.61)
Total Bodily Injury		146.60	43.60	171.44	51.32
Property Damage		87.99	87.99	94.67	94.67
SEF 44		4.33	2.17	5.06	2.54
Total Complusory Section (plus SEF 44)		250.99	185.56	284.91	207.48
Reduction in Cost			65.43		77.43

Comparison of Discounted Loss Costs --- Option 3s

Benefit		**Current Policy @7/90**	**Proposed Policy @7/90**	**Current Policy @1/92**	**Proposed Policy @1/92**
Medical		4.24	12.00	4.83	13.66
Funeral			0.36	1.08	0.411.23
Death		2.04	11.63	2.32	13.23
Disability -	Wage Earner	3.81	13.86	4.34	15.77
	Deemed Employed	0.18	0.53	0.20	0.60
	Student	nil	1.25	nil	1.42
	Housecare	0.44	1.18	0.50	1.34
	Childcare	nil	1.32	nil	1.50
Other		0.23	0.23	0.26	0.26
Total No-Fault		11.30	43.08	12.86	49.02
Uninsured Motorist	- B.I.	0.77	0.28	0.88	0.32
	- P.D.	nil	nil	nil	nil
Total Accident Benefits			12.07	43.36	13.7449.34
Bodily Injury (excluding expense)		127.54	46.81	149.15	54.74
B.I. Claim Adjustment Expense		19.06	7.00	22.29	8.19
Offset from Higher A.B.		n/a	(8.04)	n/a	(9.15)
Total Bodily Injury		146.60	45.77	171.44	53.78
Property Damage		87.99	87.99	94.67	94.67
SEF 44		4.33	2.17	5.06	2.54
Total Complusory Section (plus SEF 44)		250.99	179.29	284.91	200.33
Reduction in Cost			71.70		84.58

APPENDIX C

DETAILED ANALYSIS BY SECTION

DETAILED ANALYSIS BY SECTION

I 1. **Medical/Rehabilitation, Long Term Care.**

Current:

Reasonable and essential expenses, excess to Alberta Health Care Insurance, up to $5,000 per person within 2 years.

Option 1:

Reasonable and essential expenses, excess of Alberta Health Care Insurance, up to $25,000 per person within 2 years.

Option 2:

Coverage up to a maximum of $500,000 would be available for medical and rehabilitation benefits over the greater of 10 years or 20 years less the age of the victim at the time of the accident. Long term care up to a maximum of $500,000 over the lifetime of the victim.

Option 3:

Same as option 2.

Assumptions:

(a) 0.2% of the claimants are so severely injured that major renovations of residence or vehicles are necessary. The 0.2% was selected after a study of the IBC size of loss distribution in policy years 1984-1985; the percentage of claimants which had catastrophic injuries in the Accident Benefits Claims Survey was slightly less.

Options 2 & 3:

Claimants will receive $95,000 in year one, $20,000 in each year of the next three years, and $10,000 for the following six years. Yearly benefit is indexed with CPI to reflect inflation.

Claimant is aged 30. Mortality is based on 85% of the 1969-1975 C.I.A. Mortality Table.

(b) 6.5% of the claimants either recover or cannot satisfy the more stringent definition of disability after 2 years; based on Osborne survey.

Options 2 & 3:

6.5% of claimants have partial disability and require vocational training @$4,000 per person. Such cost is not in the current system because the rehabilitation industry is still in its infancy stage.

(c) 0.2% of the claimants require long term care.

Options 2 & 3:

Claimants will receive the monthly maximum of $3,000 per month until the limit is used up. Claimant is aged 30. Mortality is based on 85% of the 1969-1975 C.I.A. Mortality Table. The first monthly payment is made after 12 months.

(d) Medical claim frequency is assumed to be 0.0063.

(e) All present values are based on a discount rate of 8% p.a.

(f) CPI is 5.0% p.a.

(g) **Option 1:**

Cost of benefits will increase by 50%.

Additional Costs:

(1) Medical/Rehabilitation Cost.

= vocational training and renovations

Options 2 & 3:

$$(.065 \times .0063 \times \$4{,}000) + (.002 \times .0063 \times [\$75{,}000 + (\sum_{t=0}^{3} \$20{,}000 \times {}_t\eta_{30} (1.05 \div 1.08)^t) + (\sum_{t=4}^{9} \$10{,}000 \times {}_t\eta_{30} \times (1.05 \div 1.08)^t)])$$

$$= \quad \$1.64 + \$2.54 = \$4.18$$

${}_t\eta_{30}$ = probability claimant aged 30 survives t years

(2) Future Care Expense Cost.

Options 2 & 3:

$$(.002 \times .0063) \times \sum_{t=0}^{166} \frac{\$3.000}{1.08} \times {}_{t}\eta_{30}^{(m)} \div (1+j)^{t}$$

$$= \quad \$3.58$$

${}_{t}\eta_{30}^{(m)}$ = probability claimant aged 30 survives t months

$1 + j = (1.08)^{1/12}$

12. Death Benefits.

Current:

Principal Sum **Age of Deceased at Date of Accident**	**Head of Household**	**Spouse in Two-Parent Household**	**Dependent Relative**
Up to age of 4 years	---	---	500
5 to 9 years	---	---	1,000
10 to 17 years	5,000	5,000	1,500
18 to 64 years	5,000	5,000	1,000
65 to 69 years	5,000	5,000	1,000
70 years and over	5,000	5,000	500

In addition, with respect to the death of head of household,

a. Where there are two or more survivors, being spouse and/or dependent relatives, the principal sum payable is increased by 20% for each survivor other than the first; and

b. Where there are one or more survivors, being spouse and/or dependent relatives, 1% of the total principal sum payable each week for a period of 104 weeks. Any weekly benefit shall terminate upon death of all such survivors.

Option 1:

Principal Sum Age of Deceased at Date of Accident	Head of Household	Spouse in Two-Parent Household	Dependent Relative
Up to age of 4 years	---	---	2,000
5 to 9 years	---	---	2,000
10 to 17 years	10,000	10,000	2,000
18 to 64 years	10,000	10,000	2,000
65 to 69 years	10,000	10,000	2,000
70 years and over	10,000	10,000	2,000

In addition, with respect to the death of head of household,

a. Where there are two or more survivors, being spouse and/or dependent relatives, the principal sum payable is increased by 10% for each survivor other than the first; and

b. Where there are one or more survivors, being spouse and/or dependent relatives, 1% of the total principal sum payable each week for a period of 104 weeks. Any weekly benefit shall terminate upon death of all such survivors.

Options 2 & 3:

(a) The death of the head of household or spouse results in a payment of $25,000 plus an additional sum of $10,000 for each other survivor.

(b) The death of a dependent results in a payment of $10,000.

Assumptions:

(a) The results are based on Alberta Traffic Collision Statistics 1989, Table 3.2 (page 15).

(b) Under both the current system and the revised systems, benefit is based on the status on the date of the accident of the deceased in a household, where a spouse and/or dependents survive.

(c) There was one (1) additional dependent per claim.

(d) The additional cost of the weekly benefit was not included in the current or proposed options.

Additional Costs:

Option 1:

Age of Deceased	Number	Status of Deceased	Current Benefit	Proposed Benefit
less than 5	13	Dependent	$6,500	$26,000
5 to 9	13	Dependent	$13,000	$26,000
10 to 14	14	Dependent	$21,000	$28,000
15 to 19	60	Dependent	$90,000	$120,000
20 to 24	55	Head	$275,000	$550,000
25 to 29	47	Head + 1	$282,000	$517,000
30 to 34	45	Head + 1	$270,000	$495,000
35 to 44	71	Head + 1	$426,000	$781,000
45 to 54	46	Head + 1	$276,000	$506,000
55 to 64	46	Head + 1	$276,000	$506,000
over 64	77	Head	$385,000	$770,000
Total	487		$2,320,500	$4,325,000

Costs of benefits will increase by 86.4%.

Options 2 & 3:

Age of Deceased	Number	Status of Deceased	Current Benefit	Proposed Benefit
less than 5	13	Dependent	$6,500	$130,000
5 to 9	13	Dependent	$13,000	$130,000
10 to 14	14	Dependent	$21,000	$140,000
15 to 19	60	Dependent	$90,000	$600,000
20 to 24	55	Head	$275,000	$1,375,000
25 to 29	47	Head + 1	$282,000	$1,645,000
30 to 34	45	Head + 1	$270,000	$1,575,000
35 to 44	71	Head + 1	$426,000	$2,485,000
45 to 54	46	Head + 1	$276,000	$1,610,000
55 to 64	46	Head + 1	$276,000	$1,610,000
over 64	77	Head	$385,000	$1,925,000
Total	487		$2,320,500	$13,225,000

Cost of benefits will increase by 469.9%.

I 3. **Funeral Expense.**

Current:

$1,000 per claimant fatally injured in accident.

Options 1, 2, & 3:

$3,000 per claimant fatally injured in accident.

Assumption:

All $3,000 will be used.

Additional Costs:

The proposed benefit schedule will increase cost by 200%.

I 4.A Disability Benefit -- wage earners and deemed to be employed.

Current:

80% of average gross weekly earnings subject to a maximum benefit of $150 payable for a maximum of 104 weeks. There is a 7 day waiting period. The benefit payable is reduced where other benefits for loss of time are payable. The insurer is liable only for that proportion of benefits for loss of time that the money value of the time of the person insured bears to the aggregate of the benefits for loss of time payable under all such contracts.

Option 1:

75% of average gross weekly earnings subject to a maximum benefit of $500 payable for a maximum of 104 weeks. There is 7 day waiting period. The benefit payable is reduced where other benefits for loss of time are payable. The insurer is liable only for that proportion of benefits for loss of time that the money value of the time of the person insured bears to the aggregate of the benefits for loss of time payable under all such contracts.

Options 2 & 3 primary:

75% of average gross weekly earnings subject to a maximum benefit of $500 payable for life. There is 7 day waiting period for employed claimants and a 60 day waiting period for deemed to be employed claimants. The benefits payable is primary to other sources of income replacement.

Options 2 & 3 secondary:

75% of average gross weekly earnings subject to a maximum benefit of $500 payable for life. There is 7 day waiting period for employed claimants and a 60 day waiting period for deemed to be employed claimants. The benefits payable is secondary to other sources of income replacement (except UIC).

Assumptions:

(a) Half of unemployed claimants (i.e., 3.1%) were deemed to be employed (employed 6 of the last 12 months); based on the Accident Benefits Claims Survey database, 6.2% of private passenger vehicle claimants are unemployed.

(b) Mortality rate is based on 85% of the 1965-1979 C.I.A. Mortality Table. Current studies indicate that the mortality rate is about 80% to 85% of the 1969-1975 C.I.A. Mortality Table.

(c) All present values are calculated using a discount rate of 8% p.a.

(d) If a claimant in the accident benefits claims survey appeared to receive a weekly payment higher than the current maximum, his time loss was recalculated using $150 as the weekly benefit.

(e) Time loss is subject to seven (7) day deductible.

(f) Only claimants with time loss, and non-zero weekly wage were included in the analysis.

(g) Accident benefits claims survey was used to determine the percentage of the proposed benefits over the current benefits. We assumed 2.8% of the claimants are permanently disabled. The 2.8% was selected after a study of the permanently disabled claimants (1.4%) in the Third Party Liability Claims Survey database, doubled to include totally at-fault claimants.

(h) All permanently disabled wage earners are assumed to be age 30 and receive on average, 20% (being 35% x 60% approximately) of wage loss from other sources.

(i) The average change in Consumer Price Index in Alberta is 4.5% per annum. Since the claims databases are based on historical information, gross wage, other benefits, employee benefits, and government benefits were inflated by a factor of 4.5% p.a. to 1 January 1992.

(j) Benefits are primary to U.I.C.

(k) Permanently disabled claimants have weekly wage equivalent to the average industrial wage in Alberta. The average industrial wage in Alberta @ 1/92 will be $554.00 (based on a 1990 average figure of $518.60).

(l) **Options 2 & 3 primary:**

An additional 30% of claimants will receive benefits; under the current system, these claimants were fully compensated from other sources and did not apply for benefits.

Costs:

(i) Average claim size of proposed benefits to claimants with non-permanent injuries.

Option 1:

Employed

$$\text{Avg. Claim Size} = 1/C \sum_{k=1}^{C} \sum_{t=0}^{time_k} ben_k \div (1 + j)^t = \$5{,}346$$

Deemed to be Employed

$$\text{Avg. Claim Size} = 1/C \sum_{k=1}^{C} \sum_{t=0}^{time_k} ben_k \div (1 + j)^t = \$5{,}346$$

$time_k$ = time loss in months of the k^{th} claimant

j = discount rate (8% p.a.) converted to monthly rate

ben_k = proposed monthly benefit of k^{th} claimant

C = number of claimants in sample = 357

Options 2 & 3 primary:

Employed

$$\text{Avg. Claim Size} = 1/C \sum_{k=1}^{C} \sum_{t=0}^{time_k} ben_k \div (1 + j)^t = \$5{,}649$$

C = number of claimants in sample = 357

Deemed to be Employed

$$\text{Avg. Claim Size} = 1/C \sum_{k=1}^{C} \sum_{t=0}^{time_k} ben_k \div (1 + j)^t = \$6{,}244$$

$time_k$ = time loss in months of the k^{th} claimant

j = discount rate (8% p.a.) converted to monthly rate

ben_k = proposed monthly benefit of k^{th} claimant

C = number of claimants in sample = 222

Options 2 & 3 secondary:

Employed

$$\text{Avg. Claim Size} = 1/C \sum_{k=1}^{C} \sum_{t=0}^{\text{time}_k} \text{ben}_k \div (1 + j)^t = \$5{,}122$$

C = number of claimants in sample = 357

Deemed to be Employed

$$\text{Avg. Claim Size} = 1/C \sum_{k=1}^{C} \sum_{t=0}^{\text{time}_k} \text{ben}_k \div (1 + j)^t = \$6{,}244$$

time_k = time loss in months of the k^{th} claimant

j = discount rate (8% p.a.) converted to monthly rate

ben_k = proposed monthly benefit of k^{th} claimant

C = number of claimants in sample = 222

(ii) Average claim size of proposed benefits to claimants with permanent injuries.

Average weekly industrial aggregate wage
(January 1992)

= $554.00

${}_t\eta_{30}^{(m)}$ = probability claimant aged 30 survives t months

Option 1:

Employed

$$\text{Avg. Claim Size} = \sum_{t=0}^{23} \text{ben} \times {}_t\eta_{30}^{(m)} \div (1 + j)^t = \$40{,}140$$

Deemed to be Employed

$$\text{Avg. Claim Size} = \sum_{t=0}^{23} \text{ben} \times {}_t\eta_{30}^{(m)} \div (1 + j)^t = \$40{,}140$$

ben = monthly benefit = 4.33 x .75 x \$554.00 (@ 1/1/92) = \$1,800.50

Options 2 & 3 primary:

Employed

$$\text{Avg. Claim Size} = \sum_{t=0}^{912} \text{ben} \times {}_t\eta_{30}^{(m)} \div (1 + j)^t = \$267{,}299$$

Deemed to be Employed

$$\text{Avg. Claim Size} = \sum_{t=2}^{912} \text{ben} \times {}_t\eta_{30}^{(m)} \div (1 + j)^t = \$263{,}709$$

ben = monthly benefit = 4.33 x .75 x \$554.00 (@ 1/1/92) = \$1,800.50

Options 2 & 3 secondary:

Employed

$$\text{Avg. Claim Size} = \sum_{t=0}^{912} \text{ben} \times {}_t\eta_{30}^{(m)} \div (1 + j)^t = \$196{,}019$$

ben = monthly benefit = 4.33 x [(.75 x \$554.00) - (.2 x \$554.00)] = \$1,320.36

Deemed to be Employed

$$\text{Avg. Claim Size} = \sum_{t=2}^{912} \text{ben} \times {}_t\eta_{30}^{(m)} \div (1 + j)^t = \$263{,}709$$

ben = monthly benefit = 4.33 x .75 x \$554.00 (@ 1/1/92) = \$1,800.50

(iii) Average claim size of proposed benefits to wage earners.

Avg. Claim Size = [1.0 x (average claim size of claimants with non-permanent injuries) + 0.028 (average claim size of claimants with permanent injuries)]/1.028

Option 1:

Employed

Avg. Claim Size = (1.00 x \$5,346 + 0.028 x \$40,140)/1.028 = \$6,294

Deemed to be Employed

Avg. Claim Size = (1.00 x \$5,346 + 0.028 x \$40,140)/1.028 = \$6,294

Options 2 & 3 primary:

Employed

Avg. Claim Size = (1.00 x \$5,649 + 0.028 x \$267,299)/1.028 = \$12,776

Deemed to be Employed

Avg. Claim Size = (1.00 x \$6,244 + 0.028 x \$263,709)/1.028 = \$13,257

Options 2 & 3 secondary:

Employed

Avg. Claim Size = (1.00 x \$5,122 + 0.028 x \$196,019)/1.028 = \$10,322

Deemed to be Employed

Avg. Claim Size = (1.00 x \$6,244 + 0.028 x \$263,709)/1.028 = \$13,257

(iv) Average claim size of current benefits to claimants with non-permanent injuries.

Employed

$$\text{Avg. Claim Size} = 1/C \sum_{k=1}^{C} \sum_{t=0}^{\text{time}_k} \text{ben}_k \div (1 + j)^t = \$2,512$$

Deemed to be Employed

$$\text{Avg. Claim Size} = 1/C \sum_{k=1}^{C} \sum_{t=0}^{\text{time}_k} \text{ben}_k \div (1 + j)^t = \$2,512$$

time_k = time loss in months of the k^{th} claimant

j = discount rate (8% p.a.) converted to monthly rate

ben_k = current monthly benefit of k^{th} claimant

C = number of claimants in sample = 357

(v) Average claim size of current benefits to claimants with permanent injuries.

Employed

$$\text{Avg. Claim Size} = \sum_{t=0}^{23} 4.33 \times \text{ben} \div (1+j)^t = \$14,491$$

Deemed to be Employed

$$\text{Avg. Claim Size} = \sum_{t=0}^{23} 4.33 \times \text{ben} \div (1+j)^t = \$14,491$$

ben = \$150

${}_t\eta_{30}^{(m)}$ = probability claimant aged 30 survives t months

(vi) Average claim size of current benefits to wage earners.

Employed

$$\text{Avg. Claim Size} = (1.00 \times \$2,512 + 0.028 \times \$14,491)/1.028 = \$2,838$$

Deemed to be Employed

$$\text{Avg. Claim Size} = (1.00 \times \$2,512 + 0.028 \times \$14,491)/1.028 = \$2,838$$

(vii) Change in average claim size of benefits to wage earners.

$$\text{Percentage change} = 100\% \times \frac{(\text{Proposed - Current})}{\text{Current}}$$

Option 1:

Employed

$$= \quad 100\% \times \frac{(\$6{,}294 - \$2{,}838)}{\$2{,}838} = 121.8\%$$

Deemed to be Employed

$$= \quad 100\% \times \frac{(\$6{,}294 - \$2{,}838)}{\$2{,}838} = 121.8\%$$

Options 2 & 3 primary:

Employed

$$= \quad 100\% \times \frac{(\$12{,}776 - \$2{,}838)}{\$2{,}838} = 350.2\%$$

Deemed to be Employed

$$= \quad 100\% \times \frac{(13{,}257 - \$2{,}838)}{\$2{,}838} = 367.1\%$$

Options 2 & 3 secondary:

Employed

$$= \quad 100\% \times \frac{(\$10{,}322 - \$2{,}838)}{\$2{,}838} = 263.7\%$$

Deemed to be Employed

$$= \quad 100\% \times \frac{(\$13{,}257 - \$2{,}838)}{\$2{,}838} = 367.1\%$$

(viii) Change in frequency.

Option 1:

No change in frequency.

Options 2 & 3 primary:

Wage earners:

Frequency will increase by 30%.

Deemed to be employed:

Frequency will decrease by 37.8% $[1 - \frac{222}{357} \times 100\%]$.

Options 2 & 3 secondary:

Wage Earners:

No change in frequency.

Deemed to be employed:

Frequency will decrease by 37.8% $[1 - \frac{222}{357} \times 100\%]$.

I4.B Disability Benefits --- Students.

Current:

None.

Option 1:

None.

Options 2 & 3:

(a) Until deemed eligible to enter the work force, a lump sum yearly payment of:

- (i) $1,000 per year lost at the elementary school level
- (ii) $2,000 per year lost at the secondary school level
- (iii) $4,000 per year lost at the post-secondary school level.

(b) A student with a lengthy disability will be eligible to receive a weekly benefit if, at the time of the accident:

- (i) he is attending elementary school and attaining age nineteen (19) while still disabled
- (ii) he is attending secondary school and attaining age nineteen (19) while still disabled
- (iii) he is attending a post-secondary institution and attaining age twenty-three (23) while still disabled

at which time he/she will receive a weekly benefit of $340 per week.

Assumptions:

Options 2 & 3:

(a) There is a downward bias for students to be included in the Accident Benefits Claims Survey as only claimants eligible for accident benefits are included; since there does not exist a current benefit in the form of a student benefit, some students would be omitted from the survey.

Due to the limited information obtained on students via the Accident Benefits Claims Survey, the Third Party Liability Claims Survey is used in arriving at the distribution of students by scholastic level.

(b) To be included in this analysis, the claimant must be a student and experience time loss as a result of the accident. It is assumed that the number of claimants will increase by 12.4% (9.4% ÷ 75.6%) if the benefit were available today; based on the Accident Benefits Claims Survey, 9.4% of claimants are students, 75.6% of claimants currently eligible to receive disability benefits.

(c) As the claims survey did not include information on level of schooling, level of schooling was determined by age.

A claimant is deemed to be:

(i) at the elementary school level if fourteen (14) years of age or under

(ii) at the secondary school level if fifteen (15) to eighteen (18) years of age

(iii) at the post-secondary school level if nineteen (19) years of age or over.

(d) A claimant is deemed to lose a year of education if disabled for thirteen (13), six (6), and three (3), weeks of a school year at the elementary, secondary and post-secondary school levels respectively.

(e) The lump sum yearly benefits are based on the grade the claimant would be attending if not disabled.

(f) As there is limited information on students with lengthy disabilities, the assumption is the same as wage earners, i.e., 2.8% are permanently disabled.

(g) In calculating average lump sum amounts, the time loss distribution of wage earners based on the data obtained in the Accident Benefits Claims Survey is used. The average lump sum payment paid to students involved in private passenger vehicle accidents is predicated on the assumption that the student is equally likely to be in attendance at an elementary school, a secondary school, or at a post-secondary institution.

(h) Additional cost of permanently disabled students is based on the data obtained in the Third Party Liability Claims Survey. This additional cost is the present value of $340 per week, discounted at 8% p.a. compounded monthly, and mortality is assumed to be 85% of 1969-1975 CIA Mortality Table. Due to limited information on permanently disabled students, the additional cost is based on the median age of claimants at each scholastic level.

Median Age:		
	elementary school	9 years
	secondary school	16 years
	post-secondary school	22 years

Moreover, the additional cost for students involved in private passenger and commercial vehicle accidents is predicated on the assumption that students are equally likely to be in attendance at an elementary school, a secondary school or at a post-secondary institution.

Costs:

(i) Average claim size of loss of schooling benefit

Avg. Claim Size = $1,934

(ii) Average claim size of loss of capacity to earn income benefit

j = discount rate (8.0% p.a.) converted to monthly rate

ben = weekly benefit = $340

Cost of Claimant aged 9 with permanent injuries

$$\text{Avg. Claim Size} = (\$1{,}000 \times \sum_{t=0}^{9} (1.08)^{-t})$$

$$+ \sum_{t=120}^{1044} 4.33 \times \text{ben} \times {}_{t}\eta_{19}^{(m)} \div (1+j)^{t}$$

$$= \$7{,}247 + \$102{,}956 = \$110{,}203$$

Cost of claimant aged 16 with permanent injuries

$$\text{Avg. Claim Size} = (\$2{,}000 \times \sum_{t=0}^{2} (1.08)^{-t})$$

$$+ \sum_{t=36}^{1044} 4.33 \times \text{ben} \times {}_t\eta_{19}^{(m)} + (1+j)^t$$

$$= \$5{,}567 + \$176{,}873 = \$182{,}440$$

Cost of claimant aged 22 with permanent injuries

$$\text{Avg. Claim Size} = \$4{,}000$$

$$+ \sum_{t=12}^{996} 4.33 \times \text{ben} \times {}_t\eta_{23}^{(m)} \div (1+j)^t$$

$$= \$4{,}000 + \$205{,}600 = \$209{,}600$$

$$\text{Avg. Claim Size} = \frac{\$110{,}203 + \$182{,}440 + \$209{,}600}{3}$$

$$= \$167{,}414$$

(iii) Average claim size of proposed benefits to students

Avg. Claim Size = (1.00 x \$1,934 + 0.028 x \$167,414)/1.028 = \$6,441

(iv) Change in frequency

Options 2 & 3:

Frequency will increase by 12.4%; due to new claimants not previously eligible to receive benefits.

I4.C Home Care

Current:

A weekly benefit of $50 per week for not more than 26 weeks if completely incapacitated and unable to perform any of his or her duties.

Option 1:

A weekly benefit of $70 per week for not more than 26 weeks if completely incapacitated and unable to perform any of his or her duties.

Options 2 & 3:

A weekly benefit payable on the basis of reasonable expenses incurred up to a maximum of $50 per week of disability.

Assumptions:

a) As there is limited information on disabled homemakers, the time loss distribution for homemakers is the same as wage earners; except benefit not subject to 7 day waiting period.

b) All permanently disabled claimants are assumed to be aged 30.

c) 2.8% of homemakers are permanently disabled; same as wage earners.

d) All present values are calculated using a discount rate of 8.0% p.a. compounded monthly.

e) Mortality rate is based on 85% of the 1969-1975 CIA Mortality Table.

f) Based on the accident benefits claims survey database, 7.5% of private passenger vehicle claimants are homemakers; representing 9.9% of disability claimants currently eligible to receive benefits (9.9% = 7.5% ÷ 75.6%).

h) **Current:**
Claimants receive weekly benefit of $50 per week.

Option 1:
Claimants receive weekly benefit of $70 per week.

Options 2 & 3:
Claimants receive weekly benefit of $50 per week.

Costs:

(i) Average claim size of proposed benefits to claimants with non-permanent injuries

Option 1:

$$= 1/C \times \sum_{k=0}^{C} \sum_{t=0}^{time_k} (4.33 \times \$70) \div (1+j)^t = \$863$$

$time_k$ = time loss in months of the kth claimant; capped at 26 weeks

j = discount rate (8.0% p.a.) converted to a monthly rate

C = number of claimants in sample = 386

Options 2 & 3:

$$= 1/C \times \sum_{k=0}^{C} \sum_{t=0}^{time_k} (4.33 \times \$50) \times (1+i)^t \div (1+j)^t = \$857$$

$time_k$ = time loss in months of the kth claimant; capped at 26 weeks

j = discount rate (8.0% p.a.) converted to a monthly rate

C = number of claimants in sample = 386

(ii) Average claim size of proposed benefits to claimants with permanent injuries

Option 1:

Cost of claimant aged 30 with permanent injuries

$$= \sum_{t=0}^{5} (4.33 \times \$70) \times {}_t\eta_{30}^{(m)} \div (1+j)^t$$

= $1,791

${}_{t}\eta_{30}^{(m)}$ = probability claimant aged 30 survives t months

j = discount rate (8.0% p.a.) converted to a monthly rate

Options 2 & 3:

$$= \sum_{t=0}^{912} (4.33 \times \$50) \times {}_{t}\eta_{30}^{(m)} \div (1+j)^{t}$$

= \$32,166

(iii) Average claim size of proposed benefits to homemakers

Avg. Claim Size = [1.0 x (average claim size of claimants with non-permanent injuries) + 0.028 x (average claim size of claimants with permanent injuries)]/1.028

Option 1:

Avg. Claim Size = [(1.00 x \$863) + (0.028 x \$1,791)]/1.028 = \$888

Options 2 & 3:

Avg. Claim Size = [(1.00 x \$857) + (0.028 x \$32,166)]/1.028 = \$1,710

(iv) Average claim size of current benefits to claimants with non-permanent injuries

$$\text{Avg. Claim Size} = 1/C \sum_{k=1}^{C} \sum_{t=0}^{\text{time}_k} (4.33 \times \text{ben}) \div (1+j)^{t} = \$617$$

time_k = time loss in months of the kth claimant

ben = \$50

j = discount rate (8% p.a.) converted to a monthly rate

C = number of claimants in sample = 386

(v) Average claim size of current benefits to claimants with permanent injuries

$$\text{Avg. Claim Size} = \sum_{t=0}^{5} 4.33 \text{ x ben x } {}_{t}\eta_{30}^{(m)} + (1 + j)^{t} = \$1{,}279$$

ben = $50

${}_{t}\eta_{30}^{(m)}$ = probability claimant aged 30 survived t months

(vi) Average claim size of current benefits to homemakers

[(1.00 x $617) + (0.028 x $1,279)]/1.028 = $635

(vii) Change in average claim size of benefits to homemakers

$$\text{percentage increase} = 100\% \text{ x } \frac{\text{proposed homemaker benefit claim size}}{\text{current homemaker benefit claim size}}$$

Option 1:

$$= \quad 100\% \text{ x } \frac{\$888}{\$635} = 139.8\%$$

Options 2 & 3:

$$= \quad 100\% \text{ x } \frac{\$1{,}710}{\$635} = 269.3\%$$

(vii) Change in frequency.

Options 1, 2, & 3:

No change.

I4.D CHILDCARE

Current:

None.

Option 1:

None.

Options 2 & 3:

A weekly benefit of $200 plus an additional $50 per week per child/dependent. subject to a maximum of $350 per week would be payable for child care expenses when the person normally providing the child care was disabled.

Assumptions:

a) Only homemakers are eligible. As there is limited information on disabled homemakers, the time loss distribution for homemakers is the same as wage earners; except benefit not subject to 7 day waiting period.

b) All permanently disabled claimants are assumed to be aged 30.

c) 2.8% of homemakers are permanently disabled; same as wage earners.

d) All present values are calculated using a discount rate of 8.0% p.a. compounded monthly.

e) Mortality rate is based on 85% of the 1969-1975 CIA Mortality Table.

f) 9.9% of private passenger vehicle claimants are eligible to receive benefits; same as home care frequency.

g) Since the claims survey data does not contain information as to the number of children/dependents, one (1) child/dependent per household is assumed.

Option 1:

No benefit.

Options 2 & 3:

Claimants receive weekly benefit of \$250 per week.

Costs:

(i) Average claim size of proposed benefits to claimants with non-permanent injuries

Options 2 & 3:

$$\text{Avg. Claim Size} = 1/C \sum_{k=0}^{C} \sum_{t=0}^{\text{time}_k} (4.33 \text{ x } 250) \div (1 + j)^t = \$4{,}286$$

time_k = time loss in months of the kth claimant

j = discount rate (8.0% p.a.) converted to a monthly rate

C = number of claimants in sample = 386

(ii) Average claim size of proposed benefits to claimants with permanent injuries

$$\text{Avg. Claim Size} = \sum_{t=0}^{912} (4.33 \text{ x } \$250) \text{ x } {}_t\eta_{30}^{(m)} \div (1+j)^t = \$160{,}831$$

${}_t\eta_{30}^{(m)}$ = probability claimant aged 30 survives t months

j = discount rate (8.0% p.a.) converted to a monthly rate

(iii) Average claim size of child care benefits

Avg. Claim Size = [1.0 x (average claim size of claimants with non-permanent injuries) + 0.028 x (average claim size of claimants with permanent injuries)]/1.028

Option 1:

None.

Options 2 & 3:

Avg. Claim Size = [(1.00 x $4,286) + (0.028 x $160,831)]/1.028 = $8,550

(iv) Change in frequency.

Options 2 & 3:

Frequency will increase by 9.9%; due to new claimants not previously eligible to receive benefits.

I 5. OTHER

Options 1, 2, & 3:

No change.

I 6. Uninsured Motorist Coverage (BI portion only)

Current:

Coverage against accidents caused by uninsured motorists.

Options 1, 2, & 3:

Coverage against accidents caused by uninsured motorists.

Assumptions:

(a) Loss cost of the B.I. portion of the U.M. coverage will decrease at the same rate as the B.I. benefits.

Cost:

Options 1 & 2:

Loss cost will decrease by 26.9%*. [100% - (120% x 60.9%)].

Option 3:

Loss cost will decrease by 63.3%.*

*Based on Residual bodily injury liability. (section II.1)

II. 1. Residual Bodily Injury Liability Loss Costs

Current:

None.

Option 1:

$10,000 deductible on all non-pecuniary awards and increase ceiling to $300,000.

Option 2:

Same as option 1.

Option 3:

Tort litigation beyond no-fault benefits subject to threshold

(a) death, or
(b) permanent serious disfigurement; or
(c) permanent serious impairment of an important bodily function, caused by continuing injury which is physical in nature.

Assumptions:

Options 1 & 2:

There is no claims inflation. We have assumed claim cost will increase by 20% to reflect the increased ceiling and exaggeration of claims to offset the deductible.

Option 3:

We have defined the threshold as follows:

A claimant in the third party liability claims survey database must be deceased or have a duration of disability of at least two (2) years or have received non-pecuniary payment of at least $100,000, or suffered one or more of the following injuries:

(i) brain or spinal column - paraplegic, quadraplegic or vegetative state, other

(ii) face - laceration with serious scar

(iii) eyes - partial/total loss or loss of use of 1 or 2 eyes

(iv) ears - partial/total loss of loss of use of 1 or 2 ears

(v) nose - resulting in disfigurement

(vi) voice and larynx - loss of voice

(vii) neck - vertebrae/disk fracture

(viii) back - vertebrae/disk fracture

(ix) arm and hand - loss of arm or hand, loss of both arms or hands, loss of fingers

(x) leg and foot - loss of leg or foot, loss of both legs or feet

Costs:

Options 1 & 2:

Based on the Third Party Liability Claims survey database, a $10,000 deductible on non-pecuniary loss imposed on all claims will remove $2,715,129 in 1990 claims dollars. Thus, 60.9% [($6,942,301 - $2,715,129) ÷ $6,942,301)] of bodily injury cost will remain. However, assuming the increased ceiling and exaggeration of claims to offset the deductible will increase cost by 20%, thus, 73.1% of bodily injury injury cost will remain.

Option 3:

Based in the Third Party Liability Claims survey database, private passenger claimants exceeding the threshold received $4,223,220. Thus, 36.7% ($4,223,220 ÷ $11,511,548) of bodily injury cost will remain.

II 2. Property Damage and SEF 44

We assumed property damage loss cost will remain the same as the current policy.

Option 1:

We have assumed no changed in SEF 44 loss cost.

Options 2 & 3:

The enhancement of medical/long term care benefits and disability income benefit should reduce the SEF 44 claim cost. However, in certain serious injury cases, settlement was limited by the current policy limit and for these cases, the total payment (no fault benefits and tort benefits) would be higher than in the present system. On balance, we assumed that the SEF 44 loss cost would decrease by 50%.

III Reduction in Liability Claim Cost as an Offset to Accident Benefit Enhancements

When accident benefits are increased substantially, they would reduce the economic loss component and sometimes non-economic loss component of the bodily injury claim. This offset has always been recognized by the insurance industry.

The claims survey, however, allows us to quantify the extent of the offset more precisely than in the past. If a claimant is entitled to tort benefits, then all the accident benefits received could be deducted from his third party liability entitlement.

Based on the claims survey, claimants exceeding the threshold received 36.7% of total bodily injury dollars.

Based on the claims survey, 73.4% of the injured persons in private passenger were not totally at fault and therefore, were entitled to tort benefits.

Option 1:

70% of the private passenger automobiles enhanced accident benefits will be offset by a dollar-for-dollar third party liability reduction.

offset = 70% x (accident benefits enhancement)
= .7 x ($21.49 - $12.07) = $6.59

Option 2 primary:

70% of the private passenger automobiles enhanced accident benefits will be offset by a dollar-for-dollar third party liability reduction.

offset = 70% x (accident benefits enhancement)
= .7 x ($52.08 - $12.07) = $28.01

Option 2 secondary:

70% of the private passenger automobiles enhanced accident benefits will be offset by a dollar-for-dollar third party liability reduction.

offset = 70% x (accident benefits enhancement)
= .7 x ($43.64 - $12.07) = $22.10

Option 3 primary:

70% of the private passenger automobiles enhanced accident benefits of claimants exceeding the threshold will be offset by a dollar-for-dollar third party liability reduction.

offset = 70% x 36.7% x (accident benefits enhancement)
= .7 x .367 x ($51.80 - $12.07) = $10.21

Option 3 secondary:

70% of the private passenger automobiles enhanced accident benefits of claimants exceeding the threshold will be offset by a dollar-for-dollar third party liability reduction.

offset = 70% x 36.7% x (accident benefits enhancement)
= .7 x .367 x ($43.36 - $12.07) = $8.04

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APPENDIX 4

11 July 1991

BY POST & FAX --- 1-403-420-1763

Ms. Shelley L. Miller
Chomicki Baril
2101 Esso Centre
10060 Jasper Avenue
Edmonton, Alberta
T5J 4K2

Dear Ms. Miller:

You asked us to estimate the potential savings in automobile insurance premium if:

a. a $10,000 deductible on non-pecuniary loss is imposed on claims under $10,000, or

b. a $10,000 deductible on non-pecuniary loss is imposed on all claims.

From the claim survey, we were able to estimate the non-pecuniary loss component of each claim in 1990. When a deductible of up to $10,000 was imposed on the non-pecuniary portion, we could determine the residual amount of each claim. Party and party cost, and prejudgment interest were also reduced proportionally. Under scenarios (a) and (b), the savings in claim cost should be about $35 and $75 per car, respectively. When the market rates are adequate, such savings in claim cost should translate into premium savings of $43 and $91 per car, respectively. (Derivation of the figures are shown in Table 1). However, market rates are not adequate currently. Market forces would try to reduce the rate inadequacy first before passing along any savings. It is impossible for us to forecast the actual "savings" which will be passed along to the consumers, but we are certain that only part of the calculated premium savings will materialize in today's market.

We should point out that the above deductible scheme will lose some of its impact over time due to claims inflation and exaggeration of non-pecuniary loss to offset the deductible. We also think that scenario (a) is impractical

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and inequitable. It is impractical because every claimant would try to negotiate to settle for at least $10,000 including the non-pecuniary loss component and escape the deductible. It is inequitable because a claimant with a $10,000 settlement will pay no deductible while someone with a $9,999 settlement has to absorb the whole deductible.

Yours truly,

Joe S. Cheng

encl.
JSC:vc
AAIB*G

TABLE 1

		Scenario A up to $10,000 deductible applied to non-pecuniary loss of claims under $10,000	Scenario B up to $10,000 deductible applied to non-pecuniary loss of all claims
(1)	Proposed reform measure		
(2)	Total claim cost from B.I. survey	$6,942,301	$6,942,301
(3)	Reduction in B.I. claims	$1,280,284	$2,715,129
(4)	Cost reduction as a %	18.4%	39.1%
(5)	1990 B.I. loss cost	189.43	189.43
(6)	Reduction in B.I. claims cost	$35	$74
(7)	Expense ratio	23.6%	23.6%
(8)	Underwriting margin	(4.5%)	(4.5%)
(9)	Expected claims ratio	80.9%	80.9%
(10)	Calculated premium savings	$43	$91

NOTE:
(2) from Table 2
(3) from Tables 2 & 3:
scenario A, claims < $10,000: (1,459,138 - 178,854 = 1,280,284)
scenario B, all claims: (6,942,301 - 4,227,172 = 2,715,129)
(4) 100% x (3)/(2)
(5) from IBC letter to Ms. Steeves dated 20 June 1991.
(6) (4) x (5)
(7) from 1989 IBC green book (p.5); operating expense 20.6% + tax 3%
(8) our assumption
(9) 100% - (7) - (8)
(10) (6)/(9)

TABLE 2

ALBERTA BODILY INJURY SURVEY
BREAKDOWN OF JUDGEMENT / SETTLEMENT
CLOSED IN 1990

	All Claims	Claims Under $10,000	Claims Between $10,000 and $75,000	Claims Over $75,000
Loss of Employment Income	$1,009,393	$110,586	$607,999	$290,808
Out of Pocket	$399,569	$53,485	$177,823	$168,261
Non-Pecuniary*	$3,311,926	$1,212,709	$1,618,005	$481,212
Future Employment Income	$1,293,055	$2,300	$95,424	$1,195,331
Future Care	$228,859	$3,500	$19,359	$206,000
Gross-up for Tax	$52,500	$500	$0	$52,000
Fund Management	$15,400	$0	$400	$15,000
Party and Party Costs*	$360,603	$57,863	$183,501	$119,239
Prejudgment Interest	$270,996	$18,195	$133,134	$119,667
Total	$6,942,301	$1,459,138	$2,835,645	$2,647,518
Number of Claims	577	443	124	10

* Note : Party and Party Costs for Claimants Represented by Counsel Have Been Adjusted if Entered as Zero.

TABLE 3

ALBERTA BODILY INJURY SURVEY
BREAKDOWN OF JUDGEMENT / SETTLEMENT
CLOSED IN 1990
With $10,000 Deductible for Non-Pecuniary

	All Claims	Claims Under $10,000	Claims Between $10,000 and $75,000	Claims Over $75,000
Loss of Employment Income	$1,009,393	$110,586	$607,999	$290,808
Out of Pocket	$399,569	$53,485	$177,823	$168,261
Non-Pecuniary*	$932,287	$0	$541,075	$391,212
Future Employment Income	$1,293,055	$2,300	$95,424	$1,195,331
Future Care	$228,859	$3,500	$19,359	$206,000
Gross-up for Tax	$52,500	$500	$0	$52,000
Fund Management	$15,400	$0	$400	$15,000
Party and Party Costs*	$151,226	$5,408	$54,571	$91,247
Prejudgment Interest	$144,882	$3,075	$44,521	$97,286
Total	$4,227,172	$178,854	$1,541,172	$2,507,145
Number of Claims	577	443	124	10

* Note : Party and Party Costs for Claimants Represented by Counsel
Have Been Adjusted if Entered as Zero.

APPENDIX 5

ALBERTA AUTOMOBILE INSURANCE
A HISTORICAL REVIEW

Prepared by:

Joe S. Cheng, F.C.I.A.

December 1990

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Alberta Automobile Insurance
A Historical Review

We have studied the Alberta trends in claims and premiums from 1972 to 1989, to see the changes that have occurred, and hence to gain some insight into the prospects for the future.

The number of insured vehicles in Alberta has grown substantially from 487,086 vehicles in 1972 to 1,297,804 in 1989. Premium volume has grown in the same period by more than eight fold, from $66,581,225 in 1972 to $577,038,476 in 1989. The average premium per insured vehicle was $137 in 1972 and $445 in 1989. However, the 225% increase was less than the cost of living increase in Alberta during the same period. Inflation in the period would have increased the cost of living by 257%. Thus, in 1989, the average premium in real dollar terms had actually decreased by 9% when compared against 1972 premiums. Over these years, there has been a general increase in coverage. In 1972, only 67% of insured vehicles carried collision; in 1989, 75% carried collision. In 1972, 34.4% carried comprehensive coverage, 35.4% had specified perils; in 1989, 78.2% carried comprehensive and 9.5% carried specified perils. The increase in coverage together with a decrease in average premium in real dollar terms indicated that Albertans were getting a better deal for their dollar in 1989 than in 1972.

This, however, did not mean that premiums, have been stable over the years. Exhibit I illustrates the actual average premium per vehicle insured, all coverages combined. Between 1972 and 1989 there were two periods where the average premiums increased dramatically: 1974 to 1977 and 1980 to 1983. In the first of these periods, the average premium jumped from $145 in 1974 to $272 in 1977, an increase of 23.4% per annum. While inflation was running at double digits during this period, the inflation adjusted rate of increase was still 13% per annum. Between 1980 and 1983 the rate of increase in average premiums was 15.7%, but the inflation adjusted increase was less than 1%.

Exhibit II depicts the changes in average premium per vehicle in 1989 dollars over the seventeen year period. It can be seen that in standardized dollar terms there have been drastic swings in premiums per vehicle. The highest point was reached in 1977. Since then, there has been a steady decline in real dollar premiums.

In 1989 and 1990 companies have increased premiums in Alberta. This could signal the beginning of another period of double digit rate increases.

Loss costs per vehicle insured are also illustrated in Exhibit I along with the premiums. Two observations can be made about the trend of loss costs in the period. First, there did not seem to be a correlation between premiums and losses though both premiums and losses tended to increase over time. When premiums began to increase, it did not coincide with the changes in loss costs per vehicle. Premiums tended to increase two to three years later than loss costs, and stopped increasing two to three years after loss costs had stop growing. In other words, premium lagged loss costs by two to three years.

Secondly, loss costs were cyclical. There were periods of exponential growth and periods of decline. The periods seemed to coincide with the provincial economic conditions. During periods of economic slow down loss costs were flat or decreasing. During economic recovery, loss costs tended to increase rapidly. The correlation of loss costs on economic conditions is best illustrated by looking at the inflation adjusted loss cost figures in Exhibit II. Measured in 1989 dollars, loss costs decreased during 1974-76 recession and again in the recessions of the early eighties. During the oil boom of the late seventies, loss costs increased by an average of 10% per year. The subsequent fall in loss costs per vehicle was a reflection of the severed recession that occurred in Alberta. The results of the past seventeen years indicated that there was instability in the frequency of insurance claims. There was an inverse relationship between the economy and insurance claims. This cyclical behaviour of loss costs combined with premium increases lagging 2 years behind combined to form the underwriting cycle as illustrated in Exhibit III. The ratio of claims to premiums in automobile insurance is displayed over the seventeen year period. The underwriting cycle had a period of six to eight years with the down cycle lasting longer than the recovery period. During the down leg of the cycle, companies were responding to competitors' pressure to hold rates at inadequate level. During the upturn, competition reduced and companies enjoyed redundant rate levels until competition returned to normal. The cycle was certainly not unique to Alberta automobile insurance, it happened in almost all property and casualty insurance in North America.

The trends for all coverages combined may mask the changes occurring in each coverage. Exhibits IV, V, VI, and VI-A illustrate the claim frequency and the loss costs per vehicle by coverage over the seventeen year period. From these exhibits one can conclude that the same overall pattern existed for all coverages. The periods of increase and decrease tended to match each other in broad terms. However, the driving force behind the changes in total loss costs during the past two underwriting cycles were different.

In the late seventies, it was the physical damage coverages that were increasing at a fast rate. Loss costs for collision went from $60.00 in 1976 to $120 in 1980, comprehensive loss costs went from $25 to $53, third party liability loss costs went from $89 to $137. In the late 1980's, it was third party liability that was driving the upward surge. Loss costs for third party liability went from $130 in 1984 to $215 in 1989. Collision premiums went from $100 to $144 and comprehensive loss costs went from $65 to $85.

What caused this increase in third party liability loss costs can be seen in Exhibit VI and VI-A, which tracks the frequency and severity for third party liability. Since 1982 there has been a steady increase in the average claim size in third party liability. In 1986 the average claim size jumped by over $500 and since has climbed by another $500. During the 1980's, the average claim size for liability has more than doubled.

On the other hand, over the past 17 years the claim frequency for third party liability had decreased in steps, corresponding to the recessions. The decline in frequency has finally abated. In fact, we observed an increase in the more expensive bodily injury claims and a levelling off in property damage claims.

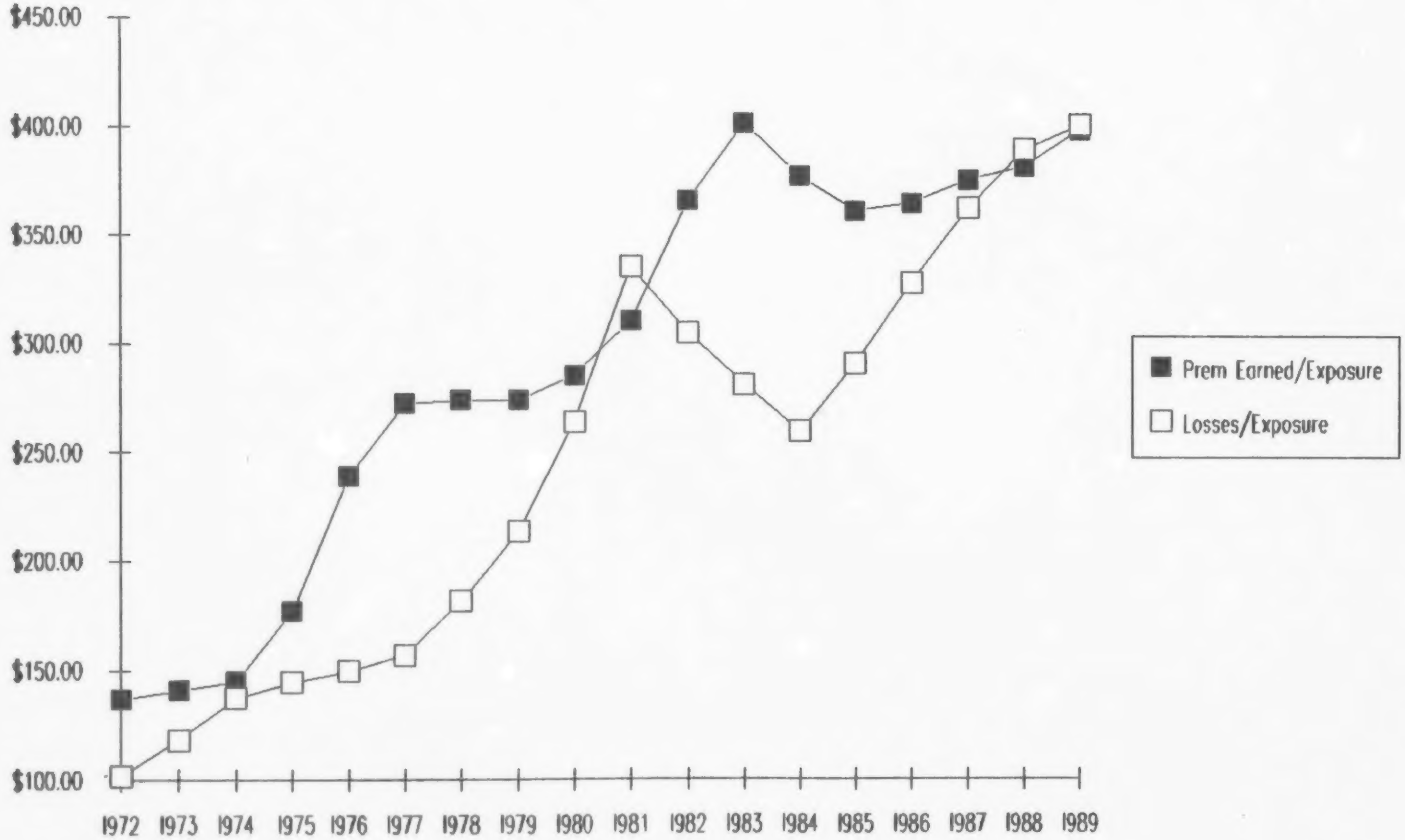
We can only examine the picture since 1982 as earlier data did not split out bodily injury from third party liability. Exhibit VII shows the loss costs for bodily injury, property damage and for the two kinds of loss combined. In 1982, the bodily injury and property damage loss costs were approximately equal; in 1989, the bodily injury loss cost was 63% higher than the property damage loss cost, and the trend in 1989 was for continuing growth in bodily injury loss costs. The cause of this increase in bodily injury loss costs was partly due to the increase in bodily injury frequency. Between 1983 and 1989, frequency had increased by 43 percent (see Exhibit VIII). During the same period property damage frequency had increased only slightly (see Exhibit IX).

Conclusion

Automobile insurance in Alberta is a cyclical business. The claims frequency was closely tied to the economic cycle. There has been a decreasing trend in insurance premium in real dollar terms. Premiums tended to lag behind loss costs by two to three years. The latest increase in claims cost was caused primarily by an increase in bodily injury claims as well as the severity of those claims.

Exhibit I

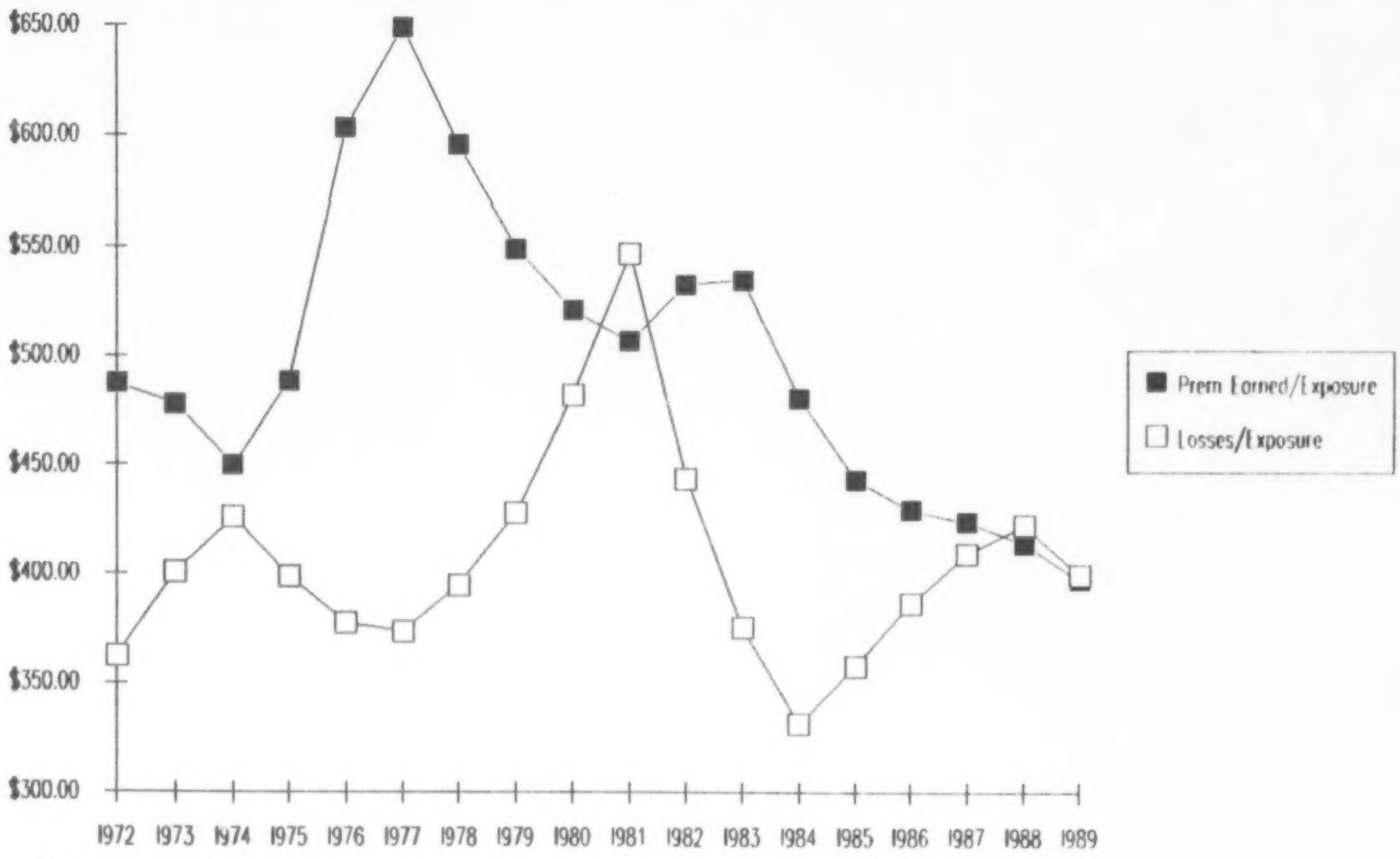
ALL COVERAGES - ALBERTA



Source: IBC Green Book Statistical Data

Exhibit II

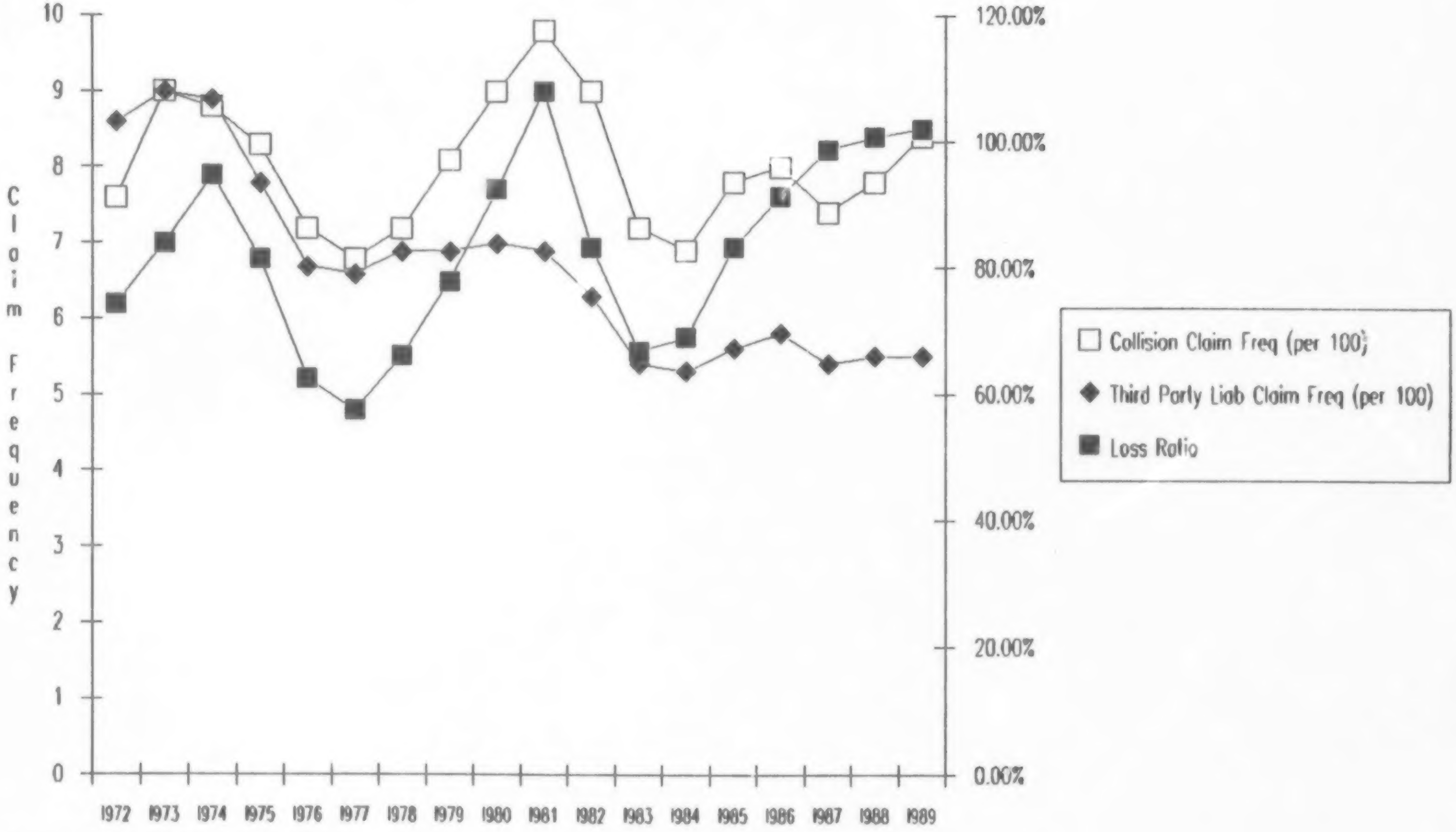
ALL COVERAGES - ALBERTA
(INDEXED)



Source: IBC Green Book Statistical Data

Exhibit III

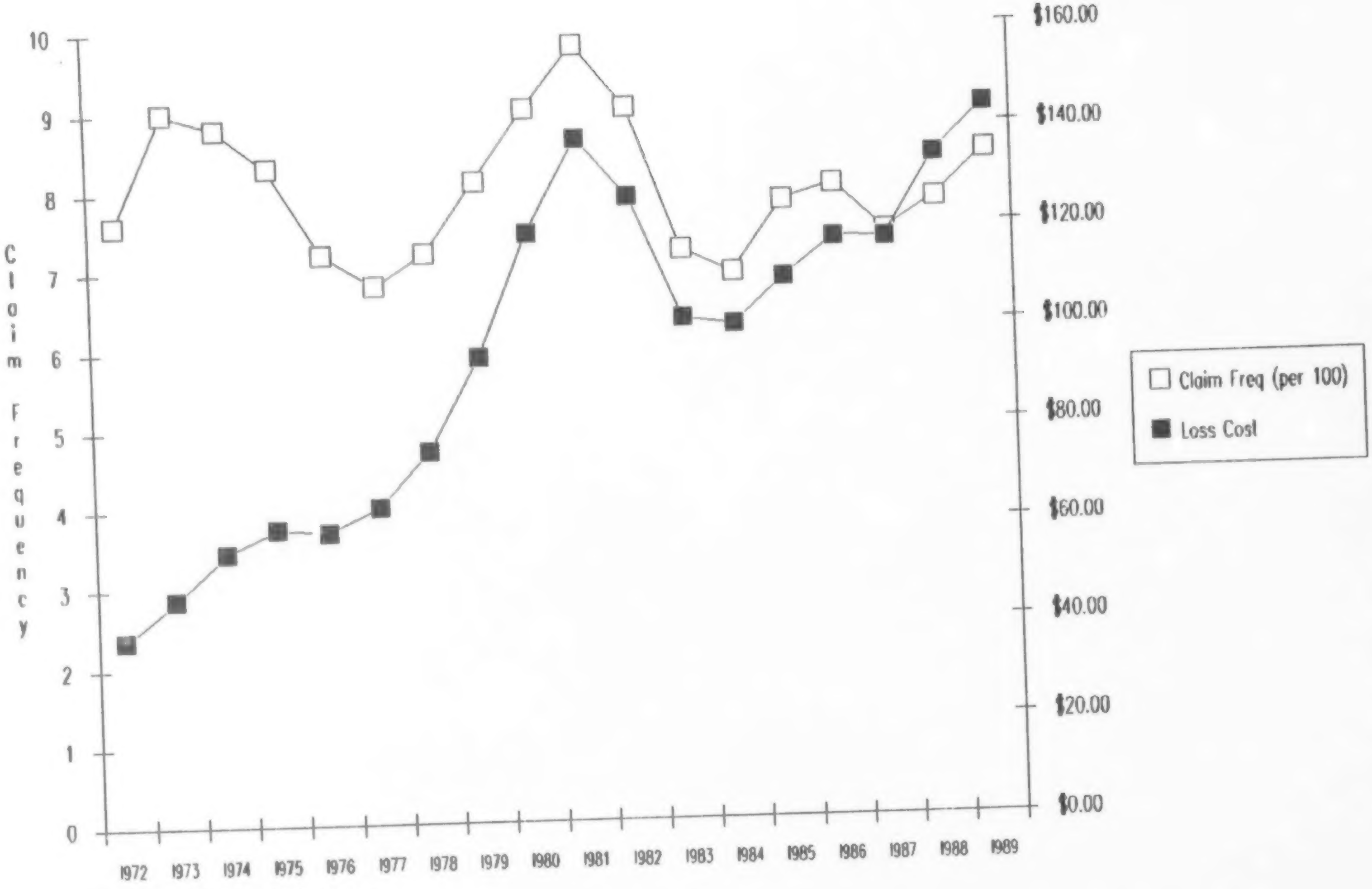
ALL COVERAGES - ALBERTA



Source: IBC Green Book Statistical Data

Exhibit IV

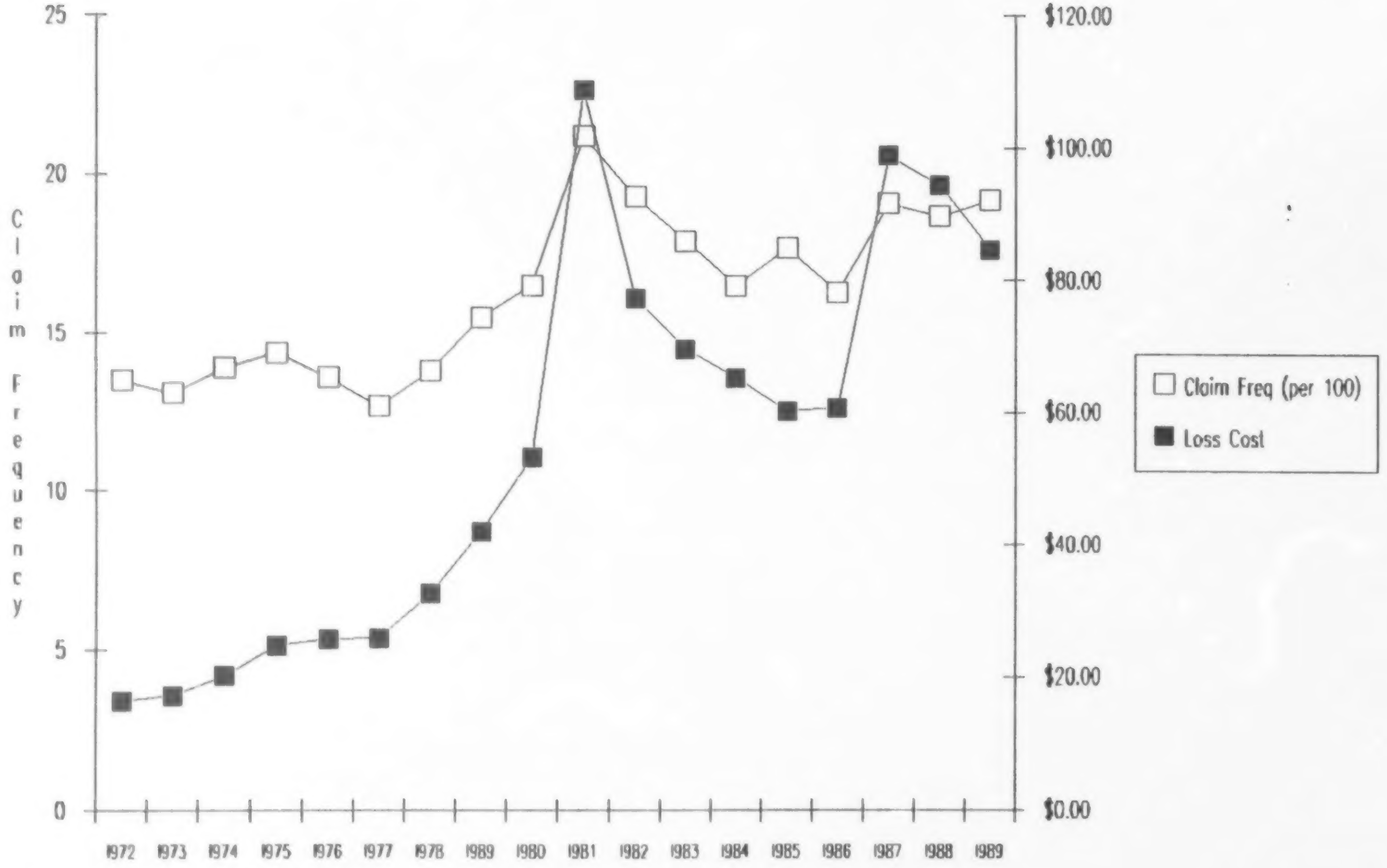
COLLISION - ALBERTA



Source: IBC Green Book Statistical Data

Exhibit V

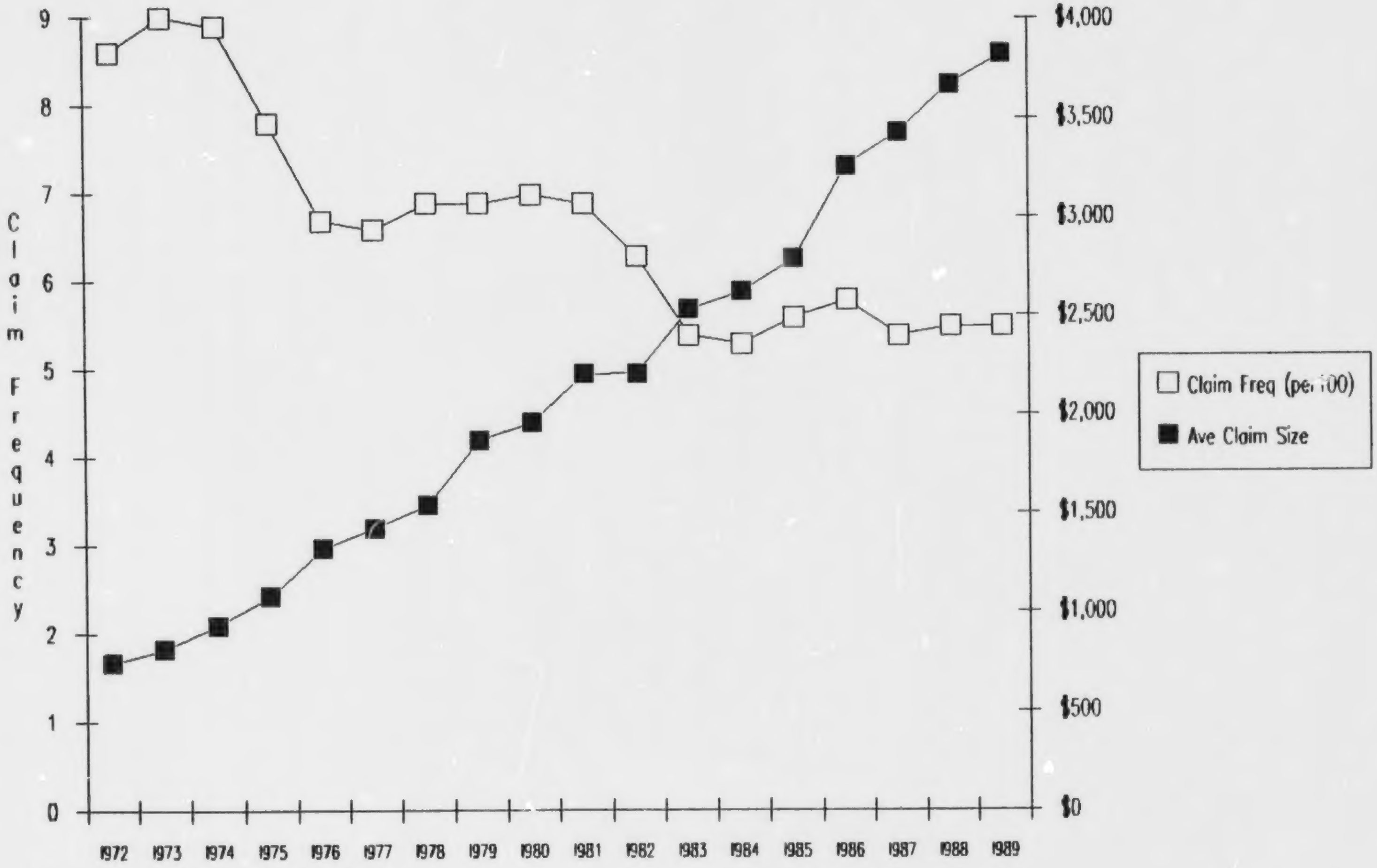
COMPREHENSIVE - ALBERTA



Source: IBC Green Book Statistical Data

Exhibit VI

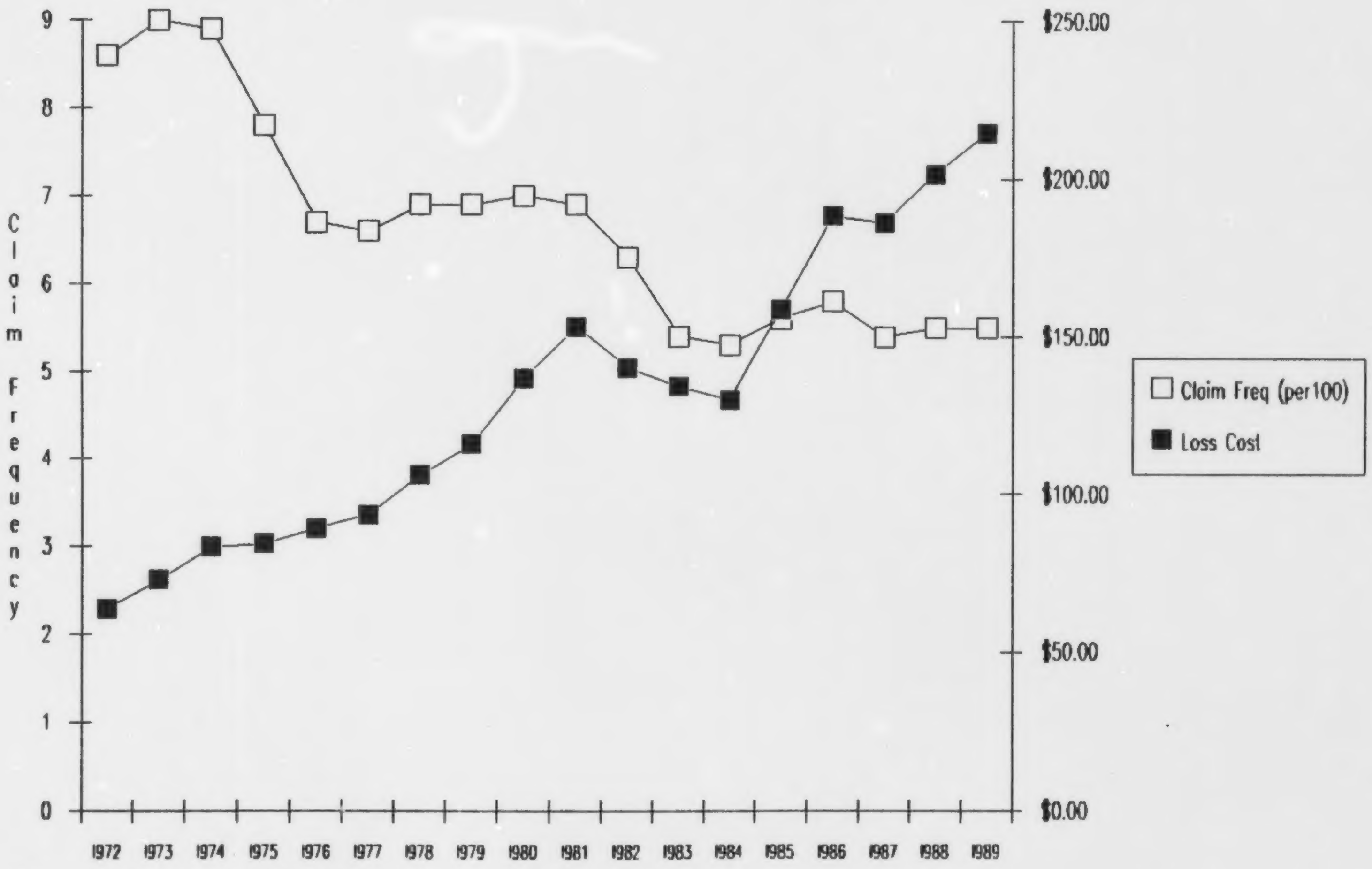
THIRD PARTY LIABILITY - ALBERTA



Source: IBC Green Book Statistical Data

Exhibit VI-A

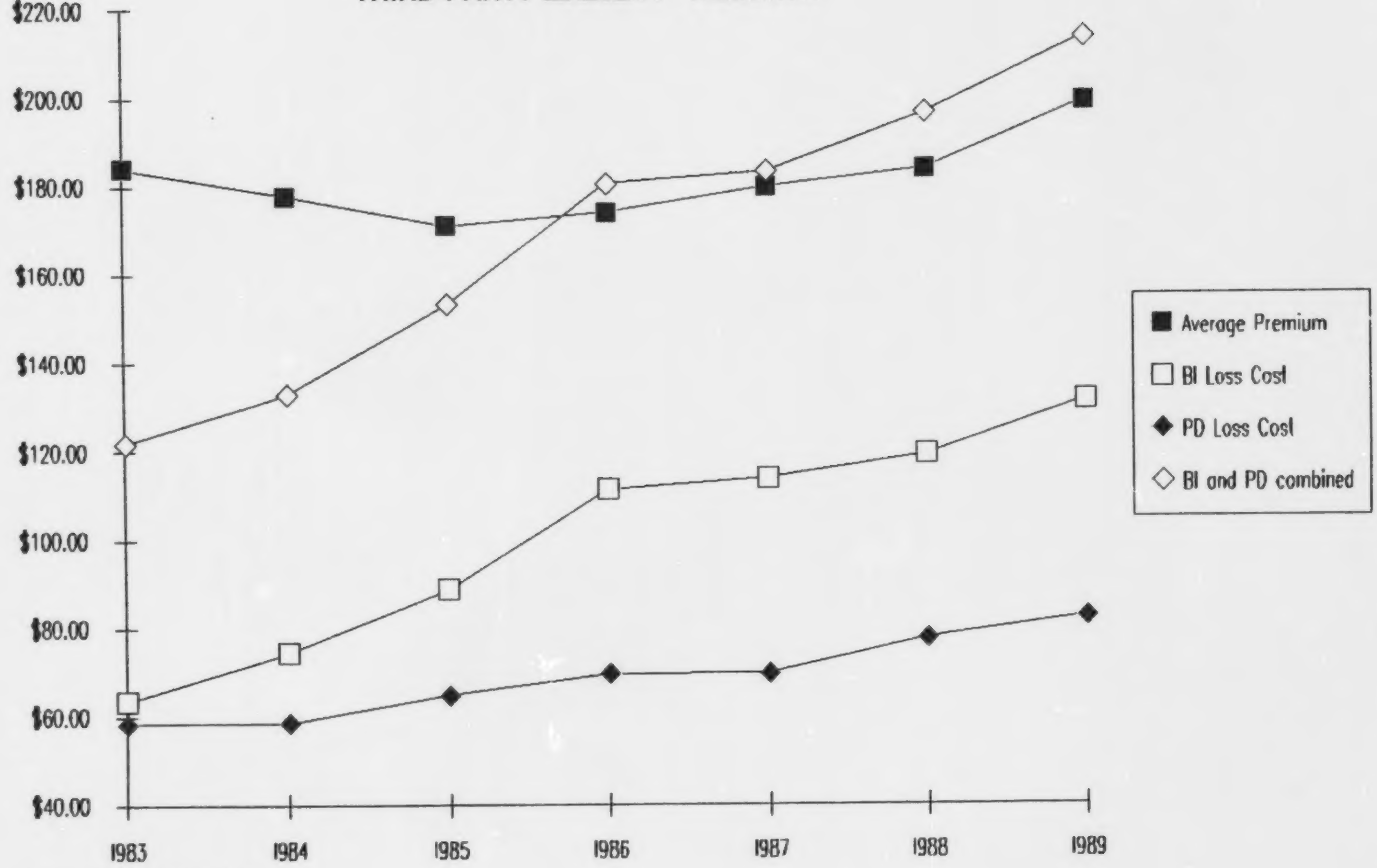
THIRD PARTY LIABILITY - ALBERTA



Source: IBC Green Book Statistical Data

Exhibit VII

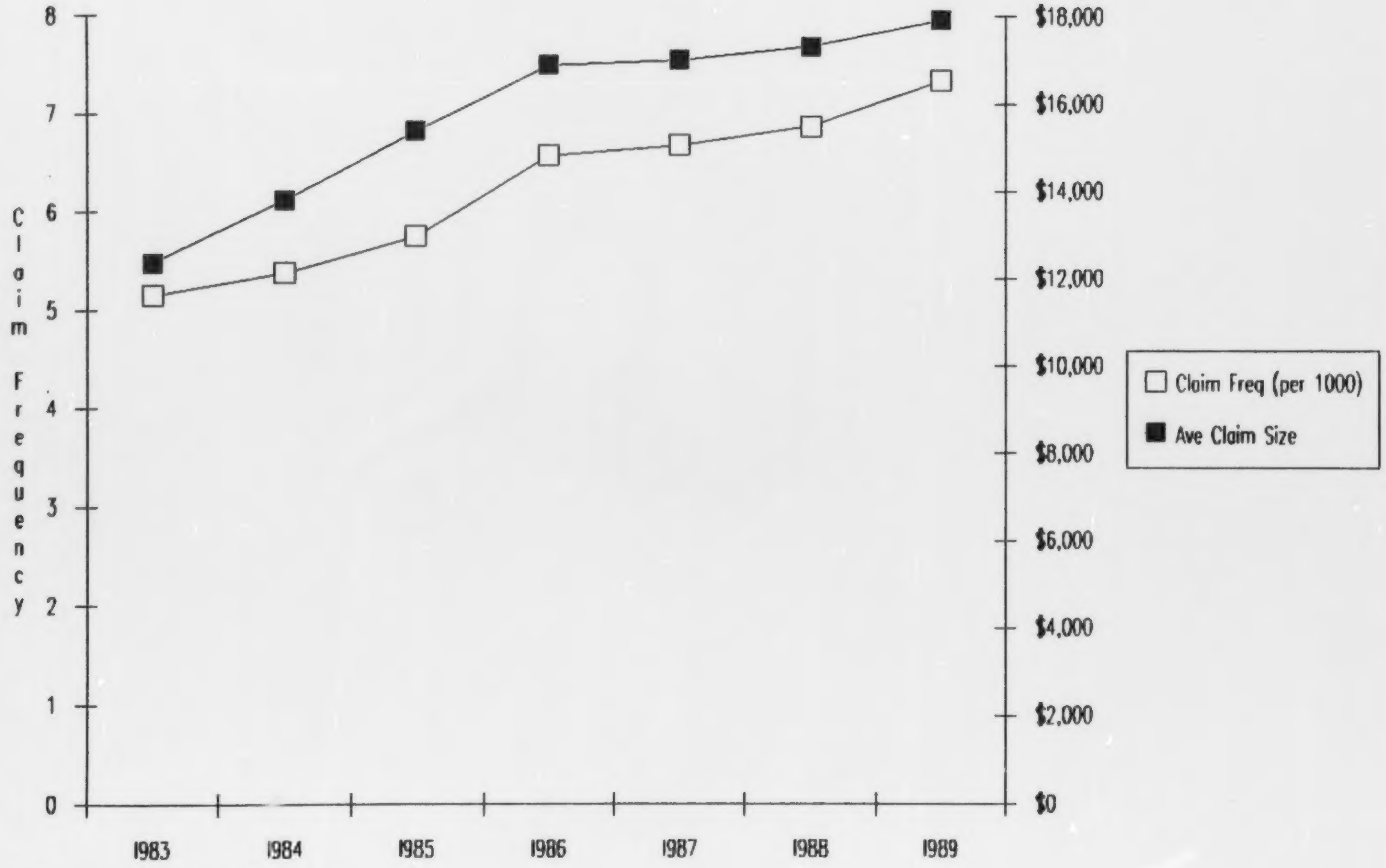
THIRD PARTY LIABILITY - ALBERTA



IBC Green Book Statistical Data

Exhibit VIII

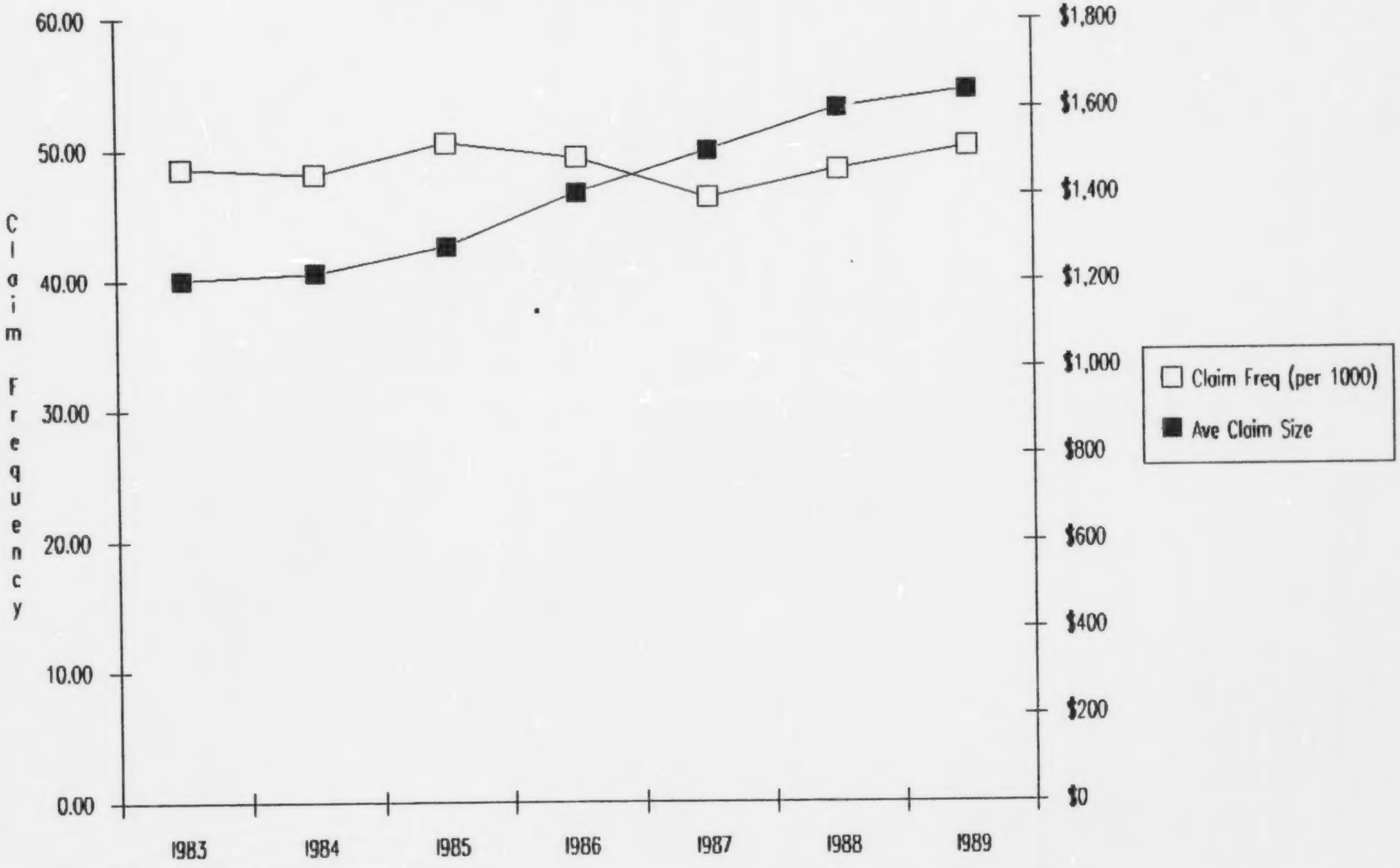
BODILY INJURY - ALBERTA



Source: IBC Green Book Statistical Data

Exhibit IX

PROPERTY DAMAGE - ALBERTA



Source: IBC Green Book Statistical Data

APPENDIX 6

A REVIEW OF OPTIONS FOR REFORM OF THE ALBERTA AUTO ACCIDENT COMPENSATION REGIME

BY

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and

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rev. 30 August 1991

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Michael J. Trebilcock
Bruce Chapman

CHAPTER 1

OPTIONS FOR REFORMING THE ALBERTA AUTO ACCIDENT COMPENSATION REGIME

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I PERSPECTIVES ON ACCIDENT LAW REFORM

In evaluating the efficacy of the present Alberta auto accident compensation regime and alternatives thereto with respect to traffic-related injuries, it is obviously necessary to be clear on the criteria against which they are to be evaluated. Unfortunately, in the case of the tort system, which is a central ingredient of the current regime, controversy begins with this very threshold question. First, there is fundamental disagreement as to what goals the tort system is designed or can be made to serve.[1] Second, even where there is agreement on objectives, there is often controversy or at least profound uncertainty as to what the empirical evidence proves as to how well the tort system achieves those objectives or how much better or worse alternative systems are likely to do in promoting those same objectives.

(a) Deterrence Goals

Law and economics scholars, drawing on concepts of economic efficiency, tend to stress the deterrent objectives of the tort system and to evaluate existing legal doctrine or proposed reforms to it in terms of whether appropriate incentives are created for the various causative contributors to a given negative outcome (such as personal injury) to minimize the sum of accident and avoidance costs by taking cost-justified precautions to reduce the likelihood and severity of that outcome.[2] Deterrence theorists are not concerned with compensation of victims as a primary goal of the tort system (a backward-looking perspective), but view compensation rather as the tool by which accident costs are internalized to injurers in cases where cost-justified accident avoidance precautions were not taken. By confronting prospective injurers with the threat of damage awards, forward-looking incentives to take proper levels of care and avoid excessively risky activities are created.

---

[1] See e.g. Trebilcock, "The Future of Tort Law: Mapping the Contours of the Debate", 15 Canadian Bus. L.J. 471 (1989).

In an economic framework of analysis, the threat of civil liability for victims' losses is assumed to operate much as the threat of a fine does on the behaviour of a prospective wrong-doer. It is assumed that the latter, in choosing a course of conduct, will weigh the expected costs of an accident (the losses for which he or she will be liable if it occurs, multiplied by the probability of it occurring if such a course of conduct is chosen) against the costs of adopting some alternative course of conduct that will avoid, or reduce the probability of, the accident (i.e. accident costs will be weighed against avoidance costs).[3] If the latter costs are less than the former, rational drivers, confronting this calculus, will avoid the conduct that may lead to an accident and if they fail to do so will be found liable in negligence in a subsequent tort action by the victim. This version of the negligence concept involves, of course, a form of cost-benefit calculus both by the driver and by a court in any subsequent tort action. In theory, a legal regime embodying this calculus should lead to socially efficient forms of driver behaviour on the highways (although not necessarily efficient activity levels, given that the higher incidence of accidents associated with higher activity levels is not considered in the conventional negligence test).

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[2] See e.g. Steven Shavell, Economic Analysis of Accident Law (1987); A. Mitchell Polinsky, An Introduction to Law and Economics (2nd ed.) (1989); Robert Cooter and Thomas Ulen, Law and Economics (1988), chap. 8: William Landes and Richard Posner, The Economic Structure of Tort Law (1987).

[3] See R.A. Posner, Economic Analysis of Law, 3rd ed. (Boston: Little, Brown, 1986) 147-51, and A.M. Polinsky, Introduction to Law and Economics (Boston: Little, Brown, 1983) chapter 6.

However, while minimizing the sum of accident and avoidance costs is efficient, the risk of confronting a large liability judgment entails costs. Just as accident and avoidance costs are real social costs, so too are the costs (or disutility) associated with risk bearing. If these costs can be reduced by shifting them from more to less risk-averse parties (e.g. insurers), social welfare is enhanced.[4] However, these two forms of efficiency (efficient accident reduction and efficient risk reduction) entail unavoidable trade-offs. To the extent that insurance is not possible or available, the deterrent effects of the civil liability system will be maximized by fully internalizing accident cost to wrong-doers, but the costs (or disutility) associated with risk bearing will also be maximized. To the extent that complete insurance is available, the costs of risk bearing will be eliminated, but so too will the costs of causing accidents, which will have been partly externalized (at a price) onto others (insurers). Thus, the coexistence of civil liability and third- and first-party liability insurance, or particular combinations of the two, substantially complicates analysis of the deterrent effects of the tort system on driving behaviour.[5]

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[4] See K.S. Abraham, Distributing Risk (New Haven: Yale University Press, 1986) chapter 2.

(b) Distributive Justice Goals

Scholars who adopt a less individualistic, more communitarian perspective on tort law than law and economics (deterrence) theorists tend to view most accidents as the inevitable by-product of the activities (e.g. motoring, manufacturing) which an industrialized, interdependent society has collectively decided to embrace and are sceptical that economic incentives, such as internalization of accident costs through the tort system to least-cost avoiders of them, are likely to have a significant impact on accident-causing behaviour which they view as overwhelmingly the product of momentary acts of inadvertence which the fallibility of the human condition makes us all prey to. Instead, drawing on notions of distributive justice, they stress that accident costs should be collectively, not individually, borne, that financial necessity is financial necessity, whatever the nature or cause of the misfortune that produces this states, and that requirements of horizontal equity require that all persons similarly financially impacted should be similarly treated. Thus, the tort system and its alternatives should be evaluated against their capacity to spread risk and provide meaningful compensation or insurance expeditiously and at low cost to the victims of these activities so as to minimize the financial impact of accidents on victims' lives and to facilitate rapid and effective rehabilitation.[6] Within this perspective, two competing models of appropriate levels of compensation have often been advanced: the "social assistance model" (a welfare or subsistence floor), and the more generous "social insurance model" (an income-continuity guarantee).

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[5] See, generally, M.J. Trebilcock, "Incentive Issues in the Design of No-Fault Compensation Systems" (1989) 39 University of Toronto Law Journal 19; M.J. Trebilcock, "The Social Insurance-Deterrence Dilemma of Modern North American Tort Law: A Canadian Perspective on the Liability Insurance Crisis" (1987) 24 San Diego Law Review 929.

(c) Corrective Justice Goals

More classical tort scholars, drawing on theories of corrective justice, stress notions of individual responsibility, like law and economics scholars. However, they see the purpose of tort law not as the deterrence of prospective wrong-doers but rather as imposing on a person whose morally culpable behaviour

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[6] See e.g. Sugarman, "Doing Away with Tort Law", 73 Calif. L. Rev. 558 (1985);Sugarman, Doing Away with Personal Injury Law (1989); H.J Glasbeek and R.A. Hasson, "Fault - the Great Hoax", in Lewis Klar (ed), Studies in Canadian Tort Law (1977); Terence G. Ison, The Forensic Lottery (1967); Abel, R., "The Real Tort Crisis - Too Few Claims" 68 Ohio State L.J. 443 (1987); Hutchinson, "Beyond No-Fault", (1985) 73 Calif. L.R. 755; Royal Commission Report, Compensation for Personal Injury in New Zealand (Wellington, 1967) (the Woodhouse Report).

(intentional or negligent wrong-doing) has violated the equal individual autonomy of another an obligation to restore the latter as nearly as possible to his or her pre-interaction status.[7] Corrective justice seeks to correct past injustices, not to deter future behaviour of other potential wrongdoers or to compensate victims of misfortune whose misfortune is not directly caused by the morally culpable conduct of another. Where such conduct is the cause of another's misfortune, corrective justice would seem to require that all losses suffered as a result of that conduct be redressed in so far as money is able to do this.

Corrective justice (or autonomy) theorists emphasize that the form of tort law is inconsistent with general deterrence or redistributive justice objectives. Tort law typically involves a suit by a victim against an injurer where the nature of the interaction between the two has produced a negative impact on the plaintiff. If deterrence objectives were the central focus of tort law, it may be the case that there are any number of other causal agents of the outcome whose suppression may more fully advance deterrence objectives (e.g. in the case of a highway accident, the failure of highway designers to install a low-cost protective device), but the form of the action precludes an investigation of whether penalizing the injurer or addressing these other causal agents is likely to yield the highest deterrence returns.

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[7] See e.g. Weinrib, "Toward a Moral Theory of Negligence Law", 2 Law and Philosophy 37 (1983); Weinrib, "Liberty, Community, and Corrective Justice", 1 Canadian Journal of Law and Jurisprudence 3 (1988); Weinrib, "Understanding Tort Law", 23 Valparaiso L. Rev. 485 (1989).

Moreover, the form of a tort action for personal injury requires that an injury to one person has actually occurred as the result of the conduct of another. If general deterrence objectives were the central focus of tort law, why wait for a dead or maimed body before attempting to deter accident-prone behaviour? For example, more clearly deterrence-driven legal regimes such as criminal sanctions for speeding or drunk driving attempt to interdict accident-prone behaviour before it causes accidents.

Similarly, corrective justice theorists argue that the form of a tort action is inconsistent with redistributive justice objectives. Why single out the party most immediately interacting with the plaintiff for liability, regardless of the quality of his conduct, on the grounds that he is a better risk-spreader or has a deeper pocket than the victim, when countless other people or institutions who are not parties to the action may be even better risk-spreaders or have even deeper pockets than the defendant? In other words, tort law is inherently incapable of promoting any patterned or coherent principle of distributive justice and should not be assigned this goal.

While this description of the three major normative perspectives on the goals of tort law obscures important differences of viewpoint among scholars, policy-makers, and judges who espouse one or the other of these three general perspectives on accident law, and thus risks misstating the implications of each perspective, it suggests the general lines of empirical enquiry that must be pursued in evaluating given policy options from each of these perspectives.

II EVALUATIVE CRITERIA

(a) Deterrence/Prevention

With respect to deterrence/prevention considerations, we can ask of both the current Alberta regime and alternatives to it: how well are they likely to deter or prevent traffic accidents?

(b) Compensation - The Victim Coverage Perspective

With respect to compensation considerations, viewed from the perspective of traffic accident victims, we can ask: what percentage of traffic accident victims are compensated through the tort system and how adequately; also, how many victims of auto accidents obtain compensation from other sources and how adequately?

(c) Compensation - The Cost Internalization Perspective

The corrective justice perspective on tort law would require that the costs of accidents be internalized to wrongdoers. However, this creates a tension with the compensation goal from the perspective of traffic accident victims in cases where there are no wrongdoers or the victims themselves are negligent and therefore disentitled to compensation from any third party. Nevertheless, even where cost internalization to wrongdoers as the basis of the compensation regime is rejected, we can still ask whether alternative auto compensation regimes internalize the costs of traffic accidents to driving activities generally, or externalize some of the costs to non-auto related public programmes, such as the health care system, or to members of society irrespective of their participation in driving activity. Even where an automobile compensation regime internalizes the costs of traffic accidents to driving activities generally, a further question might be asked: even in the absence of a civil liability system reflecting corrective justice values, does the pricing of financial contributions to the system through insurance premiums or other levies reflect a serious attempt to assign traffic accident costs to individual drivers or classes of drivers by reference to their relative causal contributions to these costs?

(d) Operational Efficiency

Here we can ask of both the existing regime and alternatives to it, relative to one another: how well does each achieve any of the foregoing three objectives in terms of (i) minimizing the private and social transaction and administrative costs entailed, and (ii) minimizing the time delays entailed in delivering compensation to victims?

(e) Premium Costs

In assessing the current Alberta regime and possible alternatives to it, we can ask the question: what are the likely premium implications for motorists for any given regime relative to the others?

In applying these evaluative criteria to the current regime and alternatives to it, it is important to stress the importance of a total systems analysis, recognizing that on the compensation side, in addition to the tort system, there are various forms of private and social insurance coverage for accident costs, and that on the deterrence side, in addition to the incentive effects of the tort system, there are a variety of regulatory and public enforcement policies that bear on the frequency and severity of traffic accidents.

It should also be noted that while criteria (d) and (e) do not necessarily reflect major divergences amongst the three major normative perspectives on accident law sketched in Section I of this chapter, the weight to be attached to criteria (a), (b), and (c) will vary significantly from one perspective to another, reflecting the fundamental differences in values and goals inherent in these perspectives.

III THE OPTIONS

(a) The Status Quo - Alberta

In developing our evaluation, we propose to proceed as follows. First, we will describe and evaluate the current Alberta regime, viewing it as a regime that has a maximum tort component, a relatively minimal no-fault component, and is embedded in surrounding private and social compensation schemes and surrounding regulatory and public enforcement policies. Having described the current regime, we then propose to evaluate it, as a total system, against the five criteria enumerated above.

(b) Regulatory and Public Enforcement Reforms

Our strategy is then to look at a variety of regulatory and public enforcement reforms that might be contemplated that are designed to reduce the accident rate e.g. stronger sanctions and more vigorous enforcement activity with respect to drunk driving; more effective enforcement of mandatory seatbelt laws; more effective license suspension regimes; raising the drinking or driving age; probationary licenses; curfew conditions attaching to licenses for young drivers. Given this set of reform options, it is assumed that all other aspects of the current Alberta regime remain unchanged.

(c) Tort Reform

Our next reform option is to graft onto the current Alberta regime, in addition to these possible regulatory and public enforcement reforms, various tort reforms that are primarily designed to reduce the severity of accident costs e.g. abolition of the collateral benefits rule; mandatory structured settlements; reduction of awards for non-pecuniary losses; reduction of pre-judgment interest; the adoption of a standard discount rate; and the reduction of third party claims by relatives etc.

(d) Enhanced Add-On No-Fault

With both these regulatory and public enforcement reforms and tort reforms assumed, the next option we examine is an enhanced add-on no-fault system, modelled on the proposals recently advanced by the Ontario Osborne Commission, where the current Alberta Schedule B no-fault accident benefits would be substantially enriched, but the right of traffic accident victims to sue wrongdoers is not curtailed beyond the restrictions on damage recoveries envisaged in the tort reform package referred to above and subject to subtraction of no-fault benefits from awards against third parties. As with the other options, this option will be evaluated against the five criteria enumerated above.

(e) Threshold No-Fault

The next option we will examine is what is commonly referred to as threshold no-fault where below some monetary or verbal threshold (e.g. serious and permanent physical impairment), traffic accident victims are not permitted to sue wrongdoers in tort law but are remitted to whatever private and social insurance sources of compensation may be available to them and more particularly to a schedule of enhanced first-party no-fault benefits (relative to the current Schedule B benefits). Beyond the threshold, we assume that the tort reforms noted above have been adopted, as well as the regulatory and public enforcement reforms, also noted above. The model we adopt as exemplary of this regime is the recently enacted Ontario no-fault scheme supplemented by references to the longer-standing Michigan scheme from which the Ontario scheme to some extent derives. This option will again be evaluated against the five criteria enumerated above.

(f) Pure No-Fault

The next option we propose to examine is a pure no-fault option where the right to sue in tort law is foreclosed to all traffic victims with respect to personal injuries, with victims restricted to a schedule of enhanced first party no-fault benefits. The model we adopt as exemplary of this option is the no-fault regime in place in Quebec. Obviously, with respect to this option the tort reform package referred to above is irrelevant, although the regulatory and public enforcement reform package can still be assumed. This option will be evaluated against the same set of criteria as the other options.

(g) Elective No-Fault

The final option we propose to examine is so-called elective no-fault as elaborated by the leading U.S. proponent of no-fault compensation schemes, Professor Jeffrey O'Connell of the University of Virginia Law School.[8] Under this option motorists can elect, in taking out automobile insurance, whether to retain their tort rights and purchase third party liability insurance, or forego their tort rights and purchase first party no-fault insurance. Such a scheme obviously has to deal with the problem of accidents between motorists who have made opposing elections. Because such a scheme has not been implemented in full-blown form in any jurisdiction, the empirical evidence available for assessing the scheme against our five evaluative criteria is much more fragmentary than with respect to the other options. Nevertheless, some *a priori* observations can be ventured as to how such a system would be likely to work in terms of our criteria. Again, in making this evaluation, we can assume both the tort reform package and the regulatory and public enforcement reform package noted above.

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[8] See O'Connell and Joost, "Giving Motorists a Choice Between Fault and No-Fault Insurance", (1986) 72 Virginia L. Rev. 61.

IV A COMPOSITE EVALUATION OF THE OPTIONS

In the final section of this study, we attempt to draw together in various matrices organized under each of our evaluative criteria how the various options appear to rank, and then to construct a composite evaluative matrix, with appropriate interpretative commentary. It will come as no surprise that given the fundamental differences in philosophical perspectives on the tort system and alternatives thereto described above, and reflected in our set of evaluative criteria, no single option ranks best on all criteria. Thus, inevitably, social and political choices are entailed as how to weight these various criteria in choosing amongst the various options.

CHAPTER 2

THE STATUS QUO IN ALBERTA: MAXIMUM TORT AND MINIMUM NO-FAULT

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I DESCRIPTION OF THE CURRENT SYSTEM IN ALBERTA

In Alberta automobile accidents are governed by the general tort principles of common law with some statutory modifications. In addition to this, there is a scheme of modest no-faults benefits as provided under the Insurance Act.[1] It is this combination to which we refer when we describe the Alberta system for accidents as a maximum tort, minimum no-fault scheme.

(a) Tort Law

Liability in tort rests on the notion of 'fault'. In order to be compensated by tort law, one must prove that injury or loss was caused wholly or partly by the fault of another. Fault is measured by the objective standard of reasonable care. Thus, if a motorist's conduct falls below the standard of reasonable care that the law requires - if in other words the motorist is negligent - a court will order the motorist to compensate the victim for any losses or damages.

Tort law also seeks to reimburse the accident victims for all the damages they have suffered. The basic principle for the measure of damages in tort is that the injured person should receive that sum of money which will as nearly as possible restore the victim to the position he or she was in before the accident occurred. Thus, innocent victims of motor vehicle accidents will receive damages from a court not only for their pecuniary losses but also for their non-pecuniary losses. Pecuniary losses include loss of earnings, and medical and rehabilitation expenses. Non-pecuniary losses are largely related to what is known as pain and suffering, or to loss of enjoyment of life attributable to the injury.

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[1] R.S.A. 1980, c.I-5, ss. 312-313

Each of these twin principles of tort law liability, namely that the defendants liability is based on fault and that the plaintiff recovers in full for pecuniary as well as non-pecuniary losses, have been subject to a range of developments in tort law, some of them statutory. For example, out of concern for ensuring both the defendant's liability and the plaintiff's recovery, the law in Alberta makes it compulsory for every motorist to have minimum insurance coverage of $200,000 for the risk of causing either personal injury or property damage to third parties by the negligent use or operation of a motor vehicle. This fault based insurance was made mandatory in Alberta in 1975.[2]

Where the plaintiff's injuries are fatal, the damages that can be claimed by his or her estate are also governed by legislation. This is because without specific legislation, there is no survival of action following death at common law. In Alberta, damage recovery is governed by the Fatal Accidents Act.[3] The court must assess the amount of capital necessary to produce a monthly sum equivalent to that which would assure the dependents the comforts and station in life that they would have enjoyed but for the death of the deceased. While Alberta does allow in this way for the recovery of pecuniary losses suffered by family members, Alberta differs from other Canadian provinces in that there is no statutory authority in Alberta for a claim of loss of guidance, care and companionship; for this the plaintiff family members are left to their common law remedies. In addition, pursuant to the Alberta legislation, conventional damages can be awarded for bereavement without evidence of damages.[4] The sum of $3,000 is awarded to the spouse of a deceased person, to the parents of a deceased child (to be divided equally between them), and to the minor child or children of the deceased (to be divided equally between them). The total award possible is $9,000.

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[2] Ibid, at Pt. 7

[3] R.S.A. 1980 c. F-5

In the case of non-fatal accidents, a victim's recovery for non-pecuniary losses such as pain and suffering, and loss of amenities and loss of expectation of life, are governed by the general principles established by the Supreme Court of Canada in a trilogy of cases.[5] A rough upper limit of $100,000 damages was established in 1978 for the most serious injuries for pain and suffering, loss of amenities and enjoyment of life, and loss of expectation of life. It has now been accepted by the courts that this $100,000 ceiling should be adjusted for inflation so that the current ceiling on damage awards is now around $200,000.[6]

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[4] Ibid, at s.8

[5] Andrews v. Grand & Toy Alta Ltd., [1978] 2 S.C.R. 229; Thornton v. Board of School Trustees of School District No 57 et.al. [1978] 2 S.C.R. 267; and Arnold v. Teno, [1978] 2 S.C.R. 287

[6] Lindal v. Lindal, [1981] 2 S.C.R. 629

The $100,000 limit on non-pecuniary losses, it should be stressed, acts as a ceiling, not as a scale. The most severe injuries are not set at $100,000 and all other losses injuries scaled down comparatively. Instead, the $100,000 award acts as a cap on damages which many serious injuries of varying degrees of devastation may reach.

In Alberta, legislation also provides that where a person obtains a judgment for payment of money or a judgment that money is owing, the court is to award interest from the date the cause of action arose to the date of judgment.[7] In Alberta, there is no award of interest on interest (i.e. interest is not compounded).[8] Interest awarded on non-pecuniary damages in Alberta is calculated at the rate of 4% per year, while interest on pecuniary losses is awarded at a market rate of interest.[9] Alberta is the only province which currently makes this distinction between pecuniary and non-pecuniary loss in awarding pre-judgment interest. The reason for making this distinction is that the value of non-pecuniary damages is assessed at the time of the order by the judge or jury, not at the time of the accident. That is to say, non-pecuniary damages are assessed in current dollars, eg. in 1990 a $200,000 cap applies rather than the 1978 $100,000 cap. It is, therefore, arguable that to award prejudgment interest on non-pecuniary damages at a nominal market rate of interest would over compensate the plaintiff since the nominal rate of interest also includes an inflation component.

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[7] Judgment Interest Act, S.A. 1984, c.J-0.5

[8] Ibid, s.2

[9] Ibid, s.4

Until recently, it was well established in common law that an award for damages will not normally be reduced where the plaintiff has recovered benefits from some alternative collateral source.[10] A recent Supreme Court of Canada case, however, may have altered this general rule, although the scope of the case has yet to be determined.[11] The issue at stake is whether a plaintiff should be able to recover special damages for health care services that, in most Canadian provinces, he or she has not paid for and that he or she is under no obligation to pay for. Under Alberta legislation, the person is required to claim for special damages for issued services and the Minister of Health is subrogated to this right of recovery. In a slightly different collateral source context, payments received as pension benefits or under disability insurance or unemployment insurance plans are not deducted from damage awards because to do so would, arguably, unjustifiably benefit the defendant. Payments to the deceased's dependents under an insurance policy are not considered in assessing the damages payable on the deceased's death. Payments under the Canada Pension Plan are, however, deducted from the award.

Finally, something should be said about the tax treatment of tort awards since so much tort reform ultimately relates to this decision. In Canada, compensation for non-fatal injuries is based on the before-tax loss of income, and the award itself is tax exempt. An award of damages is in the form of a lump sum payment by the defendant to the plaintiff. Unless authorised by statute, no order for periodic payments may be made. The plaintiff receives immediately a capital sum representing the present value of lost income and the cost of future care. Typically, this sum is invested to earn interest to makeup for what has been lost. While the award itself is tax free, any subsequent interest income earned on the award is taxable in the plaintiff's hands. If the plaintiff is to be compensated fully for all the costs of future care, and if the fund created for this purpose is to be adequate, it must take into account any tax consequences. This exercise of taking into account the impact of taxation is referred to as "grossing up" for taxes.[12] The theory of "grossing up"is that there should be an additional sum awarded to compensate for the tax that will accrue on the interest portion of the award.

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[10] See, e.g. Boarelli v. Flanagan, [1973] 3 O.R. 69

[11] Ratych v. Bloomer (1990), 73 O.R. (2d) 385

(b) No-fault Benefits Under the Current Scheme

In addition to the tort benefits described above, the victims of a motor vehicle accident in Alberta may receive compensation in another way. If the victim has automobile insurance, he is entitled to claim against his own insurer for certain accident, medical, death, or income replacement benefits irrespective of his responsibility or fault for the accident. These benefits are commonly referred to as "first party", "no-fault", or "Section B" benefits. This form of no-fault coverage was made compulsory by law in Alberta in 1975 and the current scheme is laid out in the Insurance Act at ss. 312 and 313. Section 313 (2) states that the insurer shall pay death benefits on the death of the insured person based on the age and status of the deceased person at the date of the accident in accordance with the following chart:

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[12] The general appropriateness of "grossing up" has now been recognized by the Supreme Court of Canada. See Watkins v. Olafson, [1989] 6 W.W.R. 481

STATUS OF DECEASED AT DATE OF ACCIDENT

Age of Deceased at Date of Accident	Head of Household	Spouse in two Parent Household	Dependent Relative
Up to age 4 years	$000	$000	$500
5 to 9 years	000	000	1000
10 to 17 years	5000	5000	1500
18 to 64 years	5000	5000	1000
65 to 69	5000	5000	1000
70 years and over	5000	5000	500

In addition, if the principal income earner of the household dies, the death benefit of the insured increases $1000 for each dependent survivor beyond the first, plus 1% of the principal sum per week for 104 weeks. The insurer must also pay actual funeral costs up to a maximum of $1,000 in respect of the death of each of the insured persons.

In the event of total disability of an insured person, the insurer shall pay, after a seven day waiting period, a weekly benefit of 80% of gross weekly earnings to a maximum of $150 per week and a minimum of $50 per week, for a maximum period of 104 weeks or until the injury ceases to be a total disability. Where an insured successfully sues a wrongdoer for damages, the value of the Schedule B benefits which are actually received are subtracted from the award.

II EVALUATION OF THE CURRENT SYSTEM

As might be expected, the evaluation of the status quo system for dealing with motor vehicle accidents in Alberta varies according to which of the different goals one adopts as primary for an assessment of such a system. The following discussion attends to each of the five possible goals for assessing an accident law system that were outlined in chapter 1.

(a) Deterrence and Prevention

What are the possible affects of a maximum tort, minimal no-fault scheme on the incentives for accident reduction? One view is that tort liability, even standing alone, will probably have few major incentive affects, and none once third party insurance is introduced.[13] This implies that any movement toward a first party no-fault system is unlikely to reduce safety in any way. Such a view turns largely on perceptions about the nature of errors involved in most automobile accidents. A 1970 study by the U.S. Department of Transportation concluded that the vast majority of accidents involved drivers who, over their lifetime, will be involved in no more than a handful of reported accidents.[14] Thus, the study found that it was fallacious to think that the drivers who cause most accidents form a small identifiable group which is guilty of hazardous driving, which is vastly over represented in accident statistics, and which is responsible, therefore, for the "accident problem". Rather the study suggests most drivers are "guilty" of driver error. A certain magnitude of driver error is representative of the behaviour of the general average of drivers, and must be considered as normal, even though such behaviour departs from "standard", "correct", or "ideal" behaviour or involves "fault" in the sense described in tort law. One study has estimated that an average driver makes 200 observations per mile, 20 decisions per mile, and one error every two miles. Those errors result in a near-collision once every 500 miles, a collision once every 61,000 miles, a personal injury to some individual once every 530,000 miles, and a fatal accident once every 16 million miles.[15]

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[13] These arguments are summarized in M. Friedland, M. Trebilcock and K. Roach, Regulating Traffic Safety (Toronto: Univ. of Toronto Press 1990), at p 71

However, if this view is asserted in its extreme form, it would mean that not only civil sanctions, but also criminal and administrative sanctions as well, are likely to prove futile in deterring accidents. Driver error would simply be an inevitable manifestation of inherent human fallibility. A similar argument is sometimes made that conduct on the highway that is dangerous to others is also typically dangerous to oneself, and no one wants to injure himself or herself. Thus, civil (and presumably other) sanctions add nothing to this desire for physical self-preservation. Again, if this argument were true, it would make all sanction regimes for driving conduct futile. But some drivers are likely in fact to be less diligent than others in assessing these physical risks; and some drivers may have a stronger taste for risks than others. In these cases, sanctions, including civil sanctions that raise the cost of risk-taking, must surely affect behaviour.[16]

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[14] U.S. Department of Transportation, Driver Behaviour and Accident Investment: Implications for Tort Liability (1970)

[15] Norman, Road Traffic Accidents - Epidemiology, Control and Prevention, World Health Organization, Public Health Papers No. 12, 1962, at 51.

Also, even in the presence of liability insurance, to the extent that accident rates are a function of activity or exposure levels (i.e. number of miles driven), as several empirical studies find,[17] and to the extent that insurance premium levels geared to exposure levels reduce driving activity, the levels of accident rates are likely to fall. In this respect premiums would ideally be geared to distance driven and the driving conditions in which those distances are driven (urban, rural, business or leisure). Territorial classifications and business-leisure driving distinctions are able to capture (albeit crudely) some of the qualitative aspects of exposure levels, but distance driven is difficult and expensive to predict and monitor, and is typically not employed as a primary rating variable. However, age and sex as rating variables also function as crude proxies for both quantitative and qualitative aspects of exposure levels. For example, young men as a class drive more miles and engage in more seriously risky behaviour than young women, and both groups are substantially overrepresented in accident statistics relative to the adult population at large.[18]

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[16] See supra n.13, at 72

[17] S. Partyka, "Simple Models of Fatality Trends Using Employment and Population Data (1984) 16 Accident Analysis and Prevention 211; and J. Hedlund, R. Arnold, E. Cerrelli, S. Partyka, P. Hoxie, and D. Skinner, "An Assessment of the 1982 Traffic Fatality Decrease", (1984) 16 Accident Analysis and Prevention 247

Moreover, current insurance practices suggest, consistent with deterrence theory, that automobile accident rates are a function not only of driving activity levels but also of driving care. The typical insurance contract combines insurance coverage with the use of deductibles and experience rating. These contractual devices suggest that insurance companies believe that drivers can be induced to exercise different levels of care in their driving given appropriate economic incentives. This is all that a deterrence theory account of tort law is claiming.

Finally, one other point about tort law's fault standard is worth emphasizing even though it is not, strictly speaking, a point about deterrence. Even under an imperfectly risk-rated third party insurance system, tort law still operates to stigmatize certain kinds of conduct and, therefore, arguably helps to reinforce socially responsible attitudes to risk taking.[19]

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[18] See W. Wiegers, "The Use of Age, Sex, and Marital Status as Rating Variables in Automobile Insurance". (1989) 39 Univ. of Toronto L.J. 149

(b) Compensation - Victim Coverage

How many victims of auto accidents get compensated from the tort system, from the no-fault accident benefit component of the existing insurance package, and from various private and social collateral sources ? How adequate is the compensation from these various sources ?

In progressive tort jurisdictions (with comparative negligence and no guest passenger rule), between 50 and 60% of all persons injured in motor vehicle accidents have a valid tort claim.[20] Unlike some other types of personal injury (e.g., medical malpractice) where a large proportion of eligible tort claimants fail to initiate claims and recover liability payments, a high percentage of eligible automobile injury claimants appear to obtain some compensation through the tort system.[21] Nevertheless, despite these apparently high rates of claims initiation and claims payment, even the most progressive tort regimes leave most traffic victims ineligible for any third-party compensation. On this basis, it is hard to disagree with commentators who have described tort compensation for automobile injuries as "incomplete" and "deliberately selective"[22] - a system of compensation that is not intended to compensate all accident victims.

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[19] The Hon. Mr. Justice Coulter, A. Osborne, Report of Inquiry into Motor Vehicle Accident Compensation in Ontario 1988 (hereafter the Osborne Commission Report) (1988) Vol 1, at 530-43

[20] D. Dewees and M. Trebilcock, The Efficacy of the Tort System and Its Alternatives: A Review of the Empirical Evidence (Faculty of Law, University of Toronto, Law and Economics Working Paper, 1991) at 16.

Unlike first-party insurance, where the payment of premiums guarantees the insured a stipulated basic coverage against loss, tort compensation relies ultimately on the ability of each negligent defendant to satisfy the specific plaintiff's damages. To the extent that defendants are uninsured or underinsured, therefore, the liability payments actually made to traffic victims, particularly those most seriously injured and suffering large economic losses, are apt to be incomplete. Although it is estimated that only a small proportion (less than 2%) of Ontario motorists are uninsured,[23] studies place this figure at between 8 and 11% of U.S. motorist nationwide, more than 20% in several states, and almost 70% in urban areas like Detroit and Los Angeles.[24] Moreover, these motorists tend to be involved in more accidents than their numbers suggest. Evidence on the rate of *under*insured motorists shows a similar contrast between Canada (where all jurisdictions retaining tort actions for automobile injuries, including Alberta, require drivers to carry a minimum of $ 200,000 liability insurance) states, and the United States (where liability insurance remains optional in 11 states, and minimum policy-limits generally range from between $10,000 and $25,000 coverage per victim). In Ontario, a recent study of paid liability claims found that almost 85% of defendants carried at least $500,000 liability coverage.[25]

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[21] D. Harris et. al. reports that 34 percent of road accident victims seek tort compensation. See Compensation and Support for Illness and Injury (Oxford: Clarendon Press, 1984), at 62

[22] R. Bombaugh "The Department of Transportation's Auto Insurance Study and Auto Accident Compensation Reform, (1971) 71 Columbia L.R. 207, at 211

[23] The Osborne Report, supra n.19. Vol 1, at 97

Ontario data collected for the Osborne Inquiry on Motor Vehicle Accident Compensation indicates that tort compensation for automobile injuries is dominated by payments for non-pecuniary losses. In a survey of about 1,500 paid liability claims closed in 1986, 94.5% received damages for non-pecuniary loss, while only 38.4% were paid for loss of employment income. In total, 45.6% of all liability payments were for non-pecuniary damages, and a further 5.4% for family law actions for loss of care, guidance, and companionship. While this ratio decreased for claims involving larger dollar amounts, non-pecuniary damages represented "the single most significant segment of damages at all levels," even for claims involving $75,000 or more. For claims of $10,000 or less, compensation for non-pecuniary loss amounted to more than 70% of total liability payments.[26]

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[24] *Ibid*., Vol 1, at 480

[25] *Ibid*, Vol 2, at 542

Ontario data also suggests that the vast majority of liability claims are dominated by relatively minor injuries with small economic losses. The vast majority of claims involve nominal injuries ("shaken up") and injury to soft tissue.[27] Of the mere 56.9% of paid claimants who suffered measurable time loss, almost 45% lost 4 weeks or less, and only 19% experienced time loss of more than 6 months.[28] More than half of all payments were for amounts of $3,000 or less (27.7% less than $1,000), and only 21.5% involved payments of more than $10,000.[29]

The compensatory effects of the current tort system are also affected by the existence of collateral benefits. A recent Ontario study concluded, "the collateral source rule results in substantial overcompensation to ... motor vehicle accident victims taken as a group.[30]" Considering all sources of compensation, this Ontario study determined that the roughly 30% of claimants with collateral benefits above and beyond add-on automobile accident benefits (themselves deducted from tort awards) received compensation for loss of employment income equal to almost 136% of their gross lost wages.[31]

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[26] For these data, see ibid Vol 1 at Fig. 7-7, 7-8 and 7-9

[27] Ibid, Vol 2 at 551

[28] Ibid

[29] Ibid

[30] Ibid, Vol 1, at 430

Notwithstanding overcompensation of some claimants when all sources are taken into account, empirical evidence also reveals a consistent tendency of the tort system to undercompensate victims with large economic losses.[32] This seems to be a function of both the claim settlement process and also insufficient liability coverage. Although recent surveys have not compared tort payments received to estimated economic losses, at least four studies based on 1960's claims data document the tendency of third-party liability insurance to overcompensate small losses and undercompensate large losses. In 1964, a University of Michigan study of serious injuries reported that those with small economic losses ($1-$999) tended to be overcompensated while those with large ($5,000-$24,999) and very large ($25,000 and over) economic losses were almost always undercompensated. A 1965 study of Ontario claims disclosed that while aggregate tort benefits represented 71.8% of total pecuniary losses for minor injuries, this ratio fell to 45.6% for serious injuries. A 1970 study by the U.S Department of Transportation found that of those who received tort compensation, claimants with economic losses of less than $400 received on average a multitude of 4.5 times their actual expenses; in contrast, those with economic loss between $10,000 and $25,000 recovered on average 70% of their economic loss, while those with economic loss of $25,000 or more recovered on average 30% of their loss. Moreover, the same pattern of overcompensation for small injuries and undercompensation of severe injuries persists even when total benefits from all compensation sources are considered.

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[31] Ibid

[32] See Bombaugh supra n.22, at 213

(c) Compensation - The Cost Internalization Perspective

To what extent are tort compensation costs borne by wrongdoers or parties at fault in traffic accidents; to what extent are they borne by other sources; to what extent are insurance premiums fault or risk-rated ?

In Canada, first-party compensation for some of the losses associated with auto accidents is available from various sources. In particular, public health insurance pays for virtually all medical and physical rehabilitation expenses.

However, in contrast to life and health insurance, first party insurance for lost household services and employment income is far less comprehensive. Except for the limited benefits payable under the no-fault provisions, no first-party insurance coverage of which we are aware is available for lost household services. Workers' compensation schemes in Canada pay substantial income replacement to traffic victims injured in the course of employment , but occupational injuries represent only a small fraction of all auto accidents. In addition, social welfare programs like the Canada Pension Plan provide long-term replacement income, but amounts are minimal ($56 plus 19% of earnings up to a maximum benefit of $146/week CPP disability payments) and limited to cases of protracted total disability. In Canada, unemployment insurance sickness benefits pay more generously (60% of lost wages up to a maximum benefit of $318/week), but compensation is limited to 15 weeks after a two week waiting period. Private long-term disability protection generally replaces 60-70% of income, but is held by fewer than half of all employees (eg. by only about 20% of U.S. employees and by 40% of full-time employees in Ontario). Employment related short-term disability income protection and sick leave are more widely held (eg. by about 56% of American employees, according to 1984 data),[33] but these pay benefits for only a short duration. To some extent, all of the private and many of the public income replacement schemes outlined above charge different premia according to the levels of income that are being insured (i.e. higher income recipients pay higher premia). In this respect, therefore, there is some limited cost internalization to the victim that are involved in automobile accidents. On the other hand, the extent to which accident victims can externalize the cost of their automobile injuries to others, eg. through public health or social welfare systems, may lead to the purchase of even lesser amounts of first party insurance, with the result that there is even less cost internalization to the parties involved in automobile accidents. The traditional tort rule on collateral source benefits, and the availability of subrogation rights to public insurers, are helpful in maintaining cost internalization.

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[33] J. O'Connell and J. Guinivan, "An Irrational Combination: The Relative Expansion of Liability Insurance and Contraction of Loss Insurance" (1988), 49 Ohio St. L.J. 757, at 763

(d) Operational Efficiencies

What administrative costs are associated with the operation of a maximum tort - minimal no-fault add-on system such as exists in Alberta? What kinds of delays are associated with payments to victims under the system?

As to the timeliness of compensation, Canadian and U.S. studies disclose considerable delays in the payment of third-party benefits, particularly to claimants with serious injuries and higher pecuniary losses.[34] A 1965 study of paid claims in Ontario estimated the median time from auto accident to tort payment at 3-5 months for minor injuries, and 11.5 months for serious injuries.[35] A similar study for the British Columbia Royal Commission on Automobile Insurance calculated these median durations as 4 months for minor injuries and 9 months for serious injuries.[36] A 1970 study by the U.S. Department of Transportation concluded that the average time between automobile accidents and third-party liability settlements was 13 months for claims involving more than this amount.[37] More recently, a 1985 U.S. Department of Transport study disclosed the following inverse relationship between the speed of tort compensation and the amount of economic loss:

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[34] See, e.g., Bombaugh supra n. 35 at 216-22; Ontario Law Reform Commission (OLRC), Report on Motor Vehicle Accident Compensation (hereafter OLRC Report) (1973) at 56-63; U.S. Department of Transportation, Compensating Auto Accident Victims: A Follow-up Report on No-Fault Auto Insurance Experiences (hereafter DOT Report) (1985) at 79.

[35] OLRC Report, supra n. 41, at 57.

[36] Ibid.

Timing of First Payment By Size of Economic Loss: Liability Claims[38]

Days from Report to First Payment	Amount of Economic Loss		
	Less Than $500	$500 to $2,500	Over $2,500
0 to 30	37.8%	8.7%	7.9%
0 to 90	61.4%	22.4%	17.3%
0 to 180	76.1%	42.0%	29.6%
0 to 365	88.1%	66.7%	50.6%

While liability claims involving small amounts of economic loss are frequently settled relatively expeditiously, third-party claims with $500 and more in economic losses typically drag on for several months before any payment is made.

First-party insurance plans display a noticeable ability to initiate a flow of payments to accident victims more rapidly than third-party liability insurance.[39] As indicated in the following table reporting U.S. data from no-fault jurisdictions, not only are first party payments to traffic victims delivered more quickly than third-party liability payments at all levels of economic loss, but first-party claims with large economic losses are compensated almost as promptly as those with small economic losses:

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[37] Bombaugh, supra n. 35 at 216.

[38] DOT Report supra n. 41 at 80.

[39] Ibid.

Timing of First Payment By Size of Economic Loss: First-Party Claims[40]

Days from Report to First Payment	Amount of Economic Loss		
	Less Than $500	$500 to $2,500	Over $2,500
0 to 30	39.8%	31.6%	31.0%
0 to 90	83.3%	74.4%	76.0%
0 to 180	95.1%	89.9%	90.3%
0 to 365	98.7%	96.3%	95.5%

Many studies have confirmed the ability of first-party insurance plans to compensate automobile accident victims much more quickly than third-party liability insurance.[41]

Studies estimate that tort compensation costs about as much to administer as is ultimately available to injured traffic victims.[42] In delivering benefits to eligible claimants, the tort system incurs three types of administrative costs: operating and claims adjustment costs of liability insurers, claimant costs of acquiring benefits, and public costs to adjudicate claims that are not settled before trial.[43] In a privately operated insurance industry, several studies estimate that the first expense category (operating and adjustment costs) represents roughly a third of each premium dollar paid for liability insurance.[44] Where the supply of liability insurance is restricted to a public monopoly, reduced brokerage fees and agency commissions appear to decrease total operating and adjustment expenses by between 10 and 15% of the premium dollar.[45] Claimant legal expenses are estimated to consume another 10 to 15% of liability premiums in Canada,[46] and roughly a quarter of the premium dollar in the United States.[47] Finally, although liability claimants do not bear the costs of public court expenditures, different studies have concluded that automobile claims account for about half of all tort claims,[48] roughly 40% of the civil trial time spent by courts of general jurisdiction,[49] and 17% of civil and criminal judicial resources.[50] Although we have as yet to find any current estimate of the total public cost of this litigation, 1968 data indicated a total public cost of motor vehicle claims adjudication in the United States of $133.7 million.[51]

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[40] Ibid.

[41] See eg., ibid, at 79 and the Osborne Report, supra n. 34, vol. II, at 546 and 569.

[42] OLRC Report, supra n. 41, at 15. See also Bombaugh supra n. 35, at 231 (citing evidence that tort compensation costs about $2.07 for every $1.00 in net benefits received by automobile accident victims).

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[43] Bombaugh supra n. 35, at 229; DOT Report, supra n. 41, at 82.

[44] See eg., OLRC Report supra n 41 at 15, 72; Osborne Report supra n. 34, Vol. I at 294, 522-23.

[45] Osborne Report, supra n. 34, Vol. I at 679.

[46] OLRC Report supra n. 41 at 15, 42, 71-72; Osborne Report, supra n. 34, Vol. I at 258 (Figure 7.7).

[47] Bombaugh supra n. 35 at 229; DOT Report supra n. 41, at 82.

[48] J. Kakalik and N. Pace Costs and Compensation Paid in Tort Litigation (1986)

Compared to first-party insurance plans, tort compensation is considerably less efficient. Comparing an average net pay-out of 50.2 cents in threshold no-fault states to a figure of 43.2 cents in traditional tort states, the U.S. Department of Transportation concludes that "a no-fault system suggests that there may be cost savings in the range of 10 to 24% of earned premiums in such a system,[52] although other estimates put the savings at a much lower figure (5 per cent).[53] In addition, although we are unaware of any efforts to measure this effect, significantly lower rates of lawyer involvement and claims litigation under first-party plans suggests that a higher percentage of benefits paid to claimants will be available to address actual economic losses from automobile accidents. When one also considers the likelihood of savings in public court costs as a result of fewer automobile accident cases, it is clear that first-party insurance is considerably more efficient in compensating automobile injuries than third-party liability insurance.

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[49] OLRC Report _supra_ n. 41, at 15.

[50] Bombaugh _supra_ n. 35, at 225.

[51] _Ibid._

[52] Rose Ann Devlin, _Liability versus No Fault Automobile Insurance Regimes: An Analysis of the Experience in Quebec_ 1988, at 249-57.

[53] Osborne Report, _supra_ n. 34, Vol. I at 528.

(e) Premium Costs[54]

The number of insured vehicles in Alberta has grown substantially from 487,086 vehicles in 1972 to 1,297,804 in 1989. Premium volume has grown in the same period by more than eight fold, from $66,581,225 in 1972 to $577,038,476 in 1989. The average premium per insured vehicle was $137 in 1972 and $445 in 1989. However, the 225% increase was less than the cost of living increase in Alberta during the same period. Inflation in the period would have increased the cost of living by 257%. Thus, in 1989, the average premium in real dollar terms had actually decreased by 9% when compared against 1972 premiums. Over these years, there has been a general increase in coverage. In 1972, only 67% of insured vehicles carried collision; in 1989, 75% carried collision. In 1972, 34.4% carried comprehensive coverage, 35.4% had specified perils; in 1989, 78.2% carried comprehensive and 9.5% carried specified perils. The increase in coverage together with a decrease in average premium in real dollar terms indicated that Albertans were getting a better deal for their dollar in 1989 than in 1972.

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[54] The following account of the growth of premium costs in Alberta under the current tort regime is taken form J. Cheng (Eckler Partners Ltd), "Alberta Automobile Insurance: A Historical Review" (unpublished 1991).

This, however, did not mean that premiums, have been stable over the years. Exhibit I (see Appendix A to this chapter) illustrates the actual average premium per vehicle insured, all coverages combined. Between 1972 and 1989 there were two periods where the average premiums increased dramatically: 1974 to 1977 and 1980 to 1983. In the first of these periods, the average premium jumped from $145 in 1974 to $272 in 1977, an increase of 23.4% per annum. While inflation was running at double digits during this period, the inflation adjusted rate of increase was still 13% per annum. Between 1980 and 1983 the rate of increase in average premiums was 15.7%, but the inflation adjusted increase was less than 1%. Exhibit II (see Appendix B to this chapter) depicts the changes in average premium per vehicle in 1989 dollars over the seventeen year period. It can be seen that in standardized dollar terms there have been drastic swings in premiums per vehicle. The highest point was reached in 1977. Since then, there has been a steady decline in real dollar premiums. Nevertheless, it should be noted that in 1989 and 1990 companies have increased premiums in Alberta. This could signal the beginning of another period of double digit rate increases.

The premium costs in Alberta also compare favourably to comparable tort jurisdictions in the rest of Canada. Between 1984 and 1988, for example, the loss cost per car insured for bodily injury and property damage liability in Alberta, while always higher than the figure for the Atlantic provinces and lower than the figure for Ontario, was much closer to the former than the latter, and never was greater than 71% of the average figure for all of Canada (excluding the other western provinces and Quebec).[55] Thus, under the current maximum tort minimum no fault regime, it appears that Albertans are enjoying premium costs that are not only falling in real terms, but also compare favourably to the national average for like jurisdictions.

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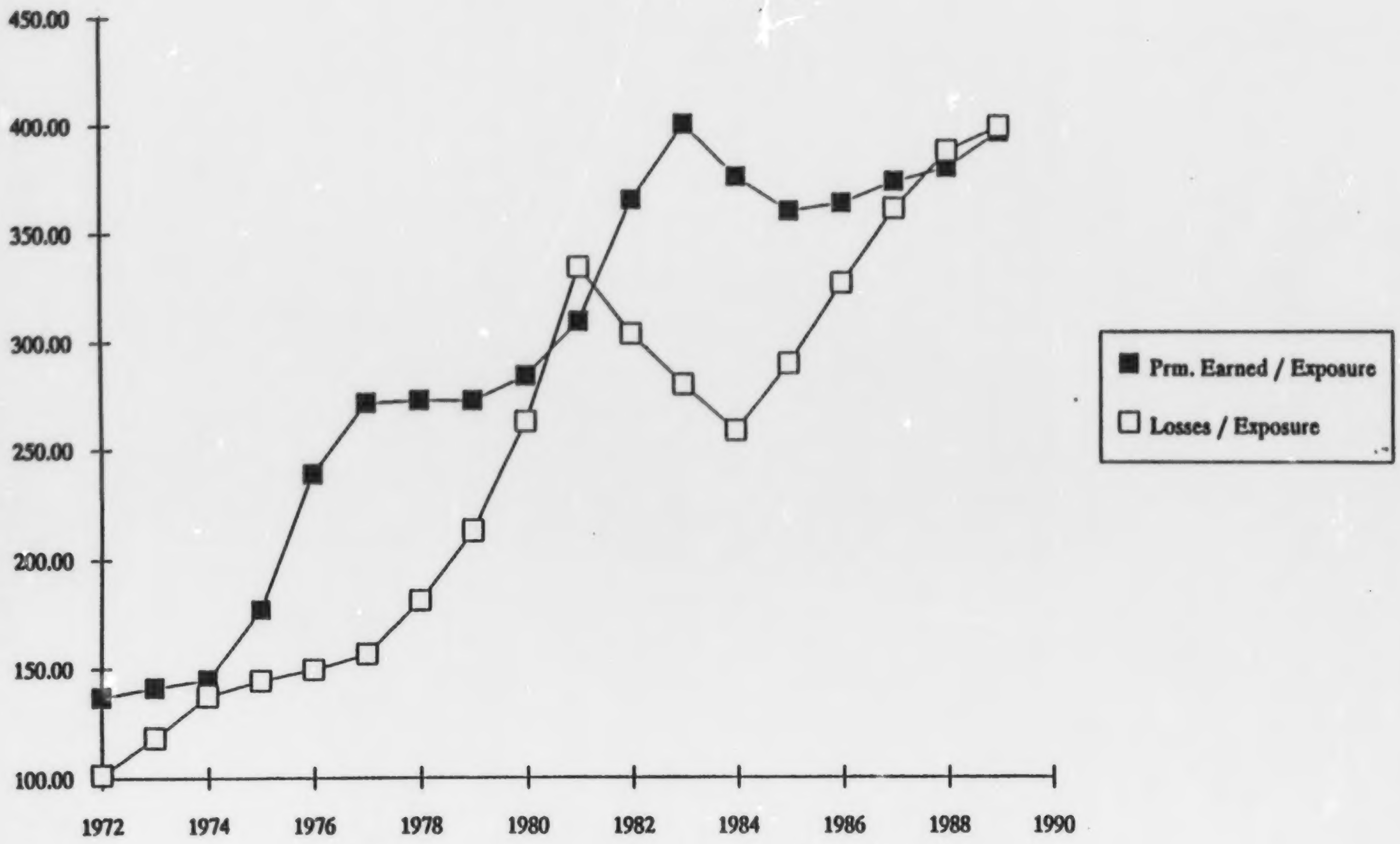
[55] See 1988 Automobile Insurance Experience (Insurance Bureau of Canada "Greenbook"), at 289.

APPENDIX A

Exhibit I

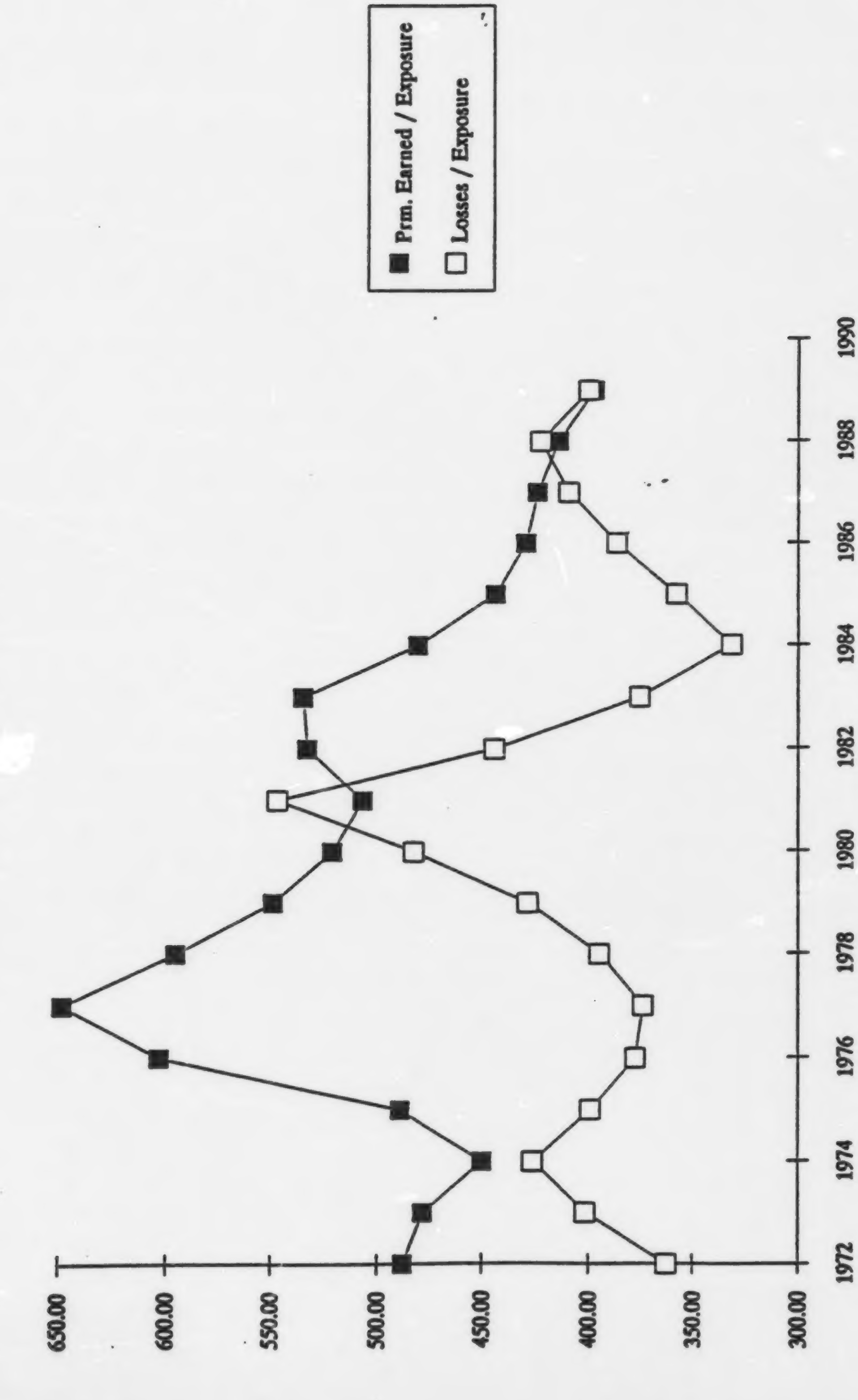
ALL COVERAGES - ALBERTA



APPENDIX B

Exhibit II

ALL COVERAGES - ALBERTA (INDEXED)



CHAPTER 3

REGULATING TRAFFIC SAFETY

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I INTRODUCTION[1]

Over 4,000 Canadians die in traffic related accidents every year. Many times that number sustain personal injuries and property damage. In 1989, 487 Albertans were killed [2] and 19,753 injured in traffic accidents. The private and social costs of traffic accidents are enormous. To put these numbers in perspective, from 1945 to 1985, 168,319 people were killed in automobile accidents in Canada: more than the combined total of Canadian fatalities in World War I (60,661) and World War II (42,042). In the decade 1976-1986 alone more people were killed on Canadian roads than were lost during World War II.[3] While aggregate traffic fatalities rose fairly consistently over time in most industrialized countries since the introduction of the automobile, they peaked in the U.S. and Canada in the mid-seventies and have since been consistently declining. Moreover, fatality rates, measured in terms of distances driven, have consistently and dramatically declined over time in most industrialized economies. For example, U.S. fatalities declined from 4.8 people killed per one hundred million kilometers driven in 1950 to 3.2 in 1960, 2.9 in 1970, 2.1 in 1980, and 1.6 in

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[1] This section is derived largely from Martin Friedland, Michael Trebilcock, and Kent Roach, 1990.

[2] Alberta Traffic Accident Statistics, 1989 (Ministry of Transportation and Utilities) Table 1.1

[3] For 1945-1975; F.H. Leacy, (1983) at pp. T271-284; for 1976-1984: Canadian Motor Vehicle Traffic Accident Statistics, 1985 Tp. 3322.

1984.[4] In Ontario, fatality rates have declined from 10.2 in 1931, 8.6 in 1940, 5.3 in 1950, 4.2 in 1960, 3.2 in 1970, 2.1 in 1980 to 1.7 in 1987.[5] The OECD in a recent study notes: "It is remarkable that this uniformity exists in spite of the diversity of legislation, government structures, safety programmes and their management".[6] Both because of the resources devoted directly to reducing the toll on the highway and to researching its causes, one might have assumed that the effects of various interventions are well understood. In fact, there is little consensus on what works and what does not work.

Most of the effort to control traffic accidents historically has been concentrated on changing driver behaviour. Police surveillance and prosecution have dominated control strategy. But one looks in vain for studies that compare the cost effectiveness of policing with, for example, improved road design and maintenance, or specific safety features in cars. Our impression is that we have concentrated and continue to concentrate our resources too heavily on changing driving behaviour. Switching some of the resources now devoted to policing and prosecution to improving car and road design and to curtailing activity levels of high risk classes of drivers seems likely to improve road safety. Beginning in the late 1950's, attention has no longer exclusively focused on drivers' care levels and prevention of crashes, as traffic safety experts and eventually policy makers began to realize that the damage sustained in crashes could be reduced by other forms of environmental regulation. The intellectual foundation for the new focus on the safety effects of automobile and environmental design came primarily from the work of William Haddon Jr. who as an epidemiologist advanced a conceptual framework (the Haddon matrix) for analyzing automobile accidents and the various methods of reducing their costs.[7] This matrix distinguishes human, vehicle, and environmental factors in accidents and temporally breaks down accidents into pre-crash, crash, and post-crash phases for analyzing potential interventions. These categories had their origins in the traditional epidemiological terms of host (in this case, those injured in motor vehicle accidents), agent (mechanical energy of the vehicle), and environment (the vehicle and surroundings in which the host and agent interact). Haddon argued that attention should be paid to all three factors, because automobile accidents represented a straight-forward example of the epidemiologic triad. Drawing on epidemiological analysis of problems such as the control of infectious diseases, Haddon and others took the view that prevailing traffic safety measures were excessively preoccupied with human factors and with reducing the incidence of crashes, whereas greater attention to the injury-producing effects of the vehicle and crash environment could prove the most effective means to reduce the harmful results of automobile accidents as measured by injuries and fatalities.

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[4] US Bureau of Census, Statistical Abstract (1971) 540, (1987) 588.

[5] Report of Inquiry into Motor Vehicle Accident Compensation in Ontario (1988) (hereinafter the Osborne Report), 750; Ontario Road Safety Annual Report (1987) 8.

[6] OECD Road Safety Research: A Synthesis (1986) 13. The trend is sometimes referred to as 'Smeed's law' (after British transportation analyst R.J. Smeed, who first drew attention to such a phenomenon in 1949), which postulates declining fatality rates with increased industrialization and motorization . See J.G.U. Adams, (1985).

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[7] W. Haddon, (1972); W. Haddon, (1980); W. Haddon and S. Baker, (1981); W. Haddon, (1970); W. Haddon, (1975).

A major analytical challenge to the epidemiological perspective that treats driver behaviour more or less as given and stresses change to the accident environment has emerged over the last decade or so. This challenge rejects the notion that road users should be viewed as passive agents in the traffic environment and argues instead that road users are likely to adapt their behavioural responses to changes in their environment. This competing perspective was brought into prominence through a controversial article published in 1975 by University of Chicago economist, Sam Peltzman,[8] who argued on the basis of empirical analysis that motor vehicle safety design improvements mandated under the U.S. National Traffic and Motor Vehicle Safety Act of 1966 had had no effect on subsequent fatality trends. Peltzman postulated that by reducing the consequences of the so-called second collision through safety regulation, risk taking, or what he called driving intensity, would be increased as drivers drove less cautiously in order to achieve the same trade-off that they had experienced prior to regulation between expected accident costs and benefits from conserving time on the road. This hypothesis, often referred to as the risk compensation or risk homeostasis theory, has reinstated to some degree a focus on the factors that influence individual driver behaviour. Another factor that has brought the use of criminal sanctions back onto centre stage over the past decade or so is the increasing political activity of pressure groups concerned with victims of drunk driving and sensitivity of politicians, police, and prosecutors to these groups. Partly obscured in this debate over the relative efficacy of public policies directed towards changing driver behaviour and policies directed to making the driving environment more forgiving of driver errors is a set of compliance-based policies typically revolving around driver licensing regimes that either through attaching conditions to the obtaining of a license or through the threat or actuality of license withdrawal attempt to reduce the activity levels as well as increase the care levels of high risk groups of drivers.

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[8] S. Peltzman, (1975).

We proceed now to review what the existing empirical evidence appears to suggest as to the relative efficacy of alternative forms of public intervention designed to reduce traffic accidents.

II SANCTIONS

While a vast amount of public resources and court time are directed to the prosecution of traffic offences, there is surprisingly little firm evidence as to the effect of criminal sanctions on the traffic accident rate. Several studies that have examined the effects of police slow-downs as a result of labour disputes leading to substantial reductions in traffic violation citations, or differential enforcement levels from one location to another, have tended to find no immediate measurable impact on the frequency or severity of traffic accidents.[9] More systematic evidence on the long-term effects of changes in sanctions or enforcement policy has tended to focus on seatbelt use, speeding, and drunk driving.

(a) Seat Belts

Many jurisdictions in North American and elsewhere have now enacted laws making seatbelt use compulsory. The empirical evidence suggests that the existence of a mandatory seatbelt use law will significantly affect seatbelt use.[10] For example, in 1986 provinces in Canada with such legislation had a use rate of 67.8%, whereas Alberta and Prince Edward Island, which had not then enacted mandatory use laws, had a use rate of only 27.2%. Alberta's use rate rose to 74.3% in 1987, the year after it adopted mandatory seatbelt use legislation, and to 82.5% in 1988. England's rates remained at about 30% from 1979 to 1982, inspite of large scale public education campaigns which cost approximately £2 million annually.[11] After legislation was adopted in 1983, compliance rose to 90%.[12] While the adoption of mandatory seatbelt use laws in the U.S. is more recent, the data is broadly consistent with the Canadian and English data,[13] although use rates are significantly influenced by levels of enforcement and levels of penalties for non-compliance. In a number of U.S. jurisdictions only secondary enforcement of seatbelt laws is permitted i.e. only where another violation has been committed. High levels of primary enforcement appear to influence significantly the use rate.

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[9] A.F. Carr, J.F. Schnelle, and R.E. Kirchner, (1980). See also R. Zylman, (1972); J.A. Gardiner, (1969).

[10] See R.J. Bonnie, (1986); B.A. Jonah and J.J. Lawson, (1985)

However, the ultimate question is not whether seatbelt laws increase use rates but whether they reduce accident costs. The answer appears to be clearly affirmative. Persons who are buckled-up are less seriously injured in accidents than persons in comparable situations who are not buckled-up. A study of 28,00 accidents in Sweden reported in 1976 by Bohlan has been very influential in subsequent debates. Bohlan concluded that the seatbelt offers full protection against fatal injury at accident speeds of up to 60 m.p.h..[14] Mackay, an English expert, claimed in 1981 that seatbelts could reduce the rate of fatalities by 50 or 60%.[15] An OECD road safety research synthesis concluded that a seatbelt, when properly used, will reduce serious injuries or fatalities by 40 to 50%.[16] A 1985 British government study that evaluated injury patterns for the year before and the year after the implementation of the 1982 legislation found significant safety gains. In their study of 14 British hospitals which admit 59% of all patients with serious traffic injuries, the authors found a reduction of 20% in severe injuries for drivers, 20% in severe injuries for front seat passengers, and 34% in brain injuries.[17]

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[11] M. Mackay, (1985).

[12] Ibid., 259

[13] B.J. Campbell, (1987).

[14] N.J. Bohlin, (1967).

[15] G.M. Mackay, (1981).

However, the concept of risk compensation or risk homeostasis, noted above, must be confronted. Will the use of seatbelts actually increase the number of accidents, even if it helps those who wear them? For example, John Adams argues that "protecting car occupants from the consequences of bad driving encourages bad driving".[18] However, a number of studies appear to show that people wearing seatbelts do not drive less carefully than others.[19] In other words, there is little, if any, risk compensation, let alone homeostasis, with seatbelt use. Drivers do not want to experience an accident, even if it is less severe than it might otherwise be. Moreover, safety features such as seatbelts provide little direct and immediate feedback to the driver and thus are distinguishable from other vehicle design features, such as good brakes and faster car acceleration. Unfortunately, the least cautious drivers seem to be the ones to belt-up last. Some studies have shown that young people are less likely to buckle-up than older drivers. The same is true for those who drive faster and for those who drink and drive - that is, the same drivers tend to engage in a variety of risky behaviours.[20] Thus, increasing the level of compliance should be increasingly effective as belt use levels increase.

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[16] OECD, (1986). The evidence of insurance losses in the United States following adoption of mandatory seat-belt laws is ambiguous, according to a study by the Highway Loss Data Institute. A comparison of insurance losses before and after adoption of eight state mandatory seat-belt use laws shows no clear-cut reductions in the number of injury claims. The researchers stated that 'belts are much less effective in preventing relatively minor injuries than serious and fatal injuries and most insurance injury claims are for relatively minor, but often expensive, injuries'; see Status Report 23 no. 9(17 September 1988) 6.

[17] W.H. Rutherford et. al., (1985).

[18] J.G.U. Adams, (1981).

One solution to the problem of seatbelt use is, of course, passive restraints, such as automatic seatbelts or airbags, which do not depend on individual decisions for their efficacy. For example, Haddon who was a strong proponent of passive restraint systems compared the active strategy of influencing people to wear seatbelts to the passive strategy of requiring airbags or similar devices. Airbag and seatbelts both attenuate the potential damaging energy transfer that occurs with sudden deceleration, but the active approach of seatbelts requires, for complete success, billions of individual actions per month by all sorts of people in all sorts of mental and physiological states. On the other hand, the universal provision of airbags to achieve the same purpose would require only a single behavioural change - a simple binding decision by one federal official or by some three or four executives in motor vehicle manufacturing companies.[21] This proposal has been the subject of enormous controversy and debate in the U.S.. Opponents view it as an obtrusive form of paternalism, and as requiring prudent drivers who already voluntarily buckle-up to cross subsidize those who do not, through being forced to buy safety devices entailing additional expense of little incremental safety value for them. However, The U.S. National Highway and Traffic Safety Administration (NHTSA) appears likely to insist on the installation of automatic restraint systems for drivers and front seat passengers in all cars produced after September 1993, unless further delays are granted in implementation.

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[19] L. Evans, P. Wasislewski, and C.R. Ban Buseck, (1982); P.S. McCarthy, (1985); M. Mackay (1985); B.A. Jonah and J.J. Lawson, (1984); B. O'Neill, A.K. Lund, P. Zador, and S. Ashton, (1985); OECD, Synthesis (1986) 65.

[20] Jonah and Lawson (1984).

(b) Speed Limits

The experience with respect to the enforcement of speed limits is somewhat more mixed than with respect to the enforcement of seatbelt use laws. This is so despite the enormous resources devoted to the apprehension and prosecution of speed limit violators - for example in Ontario, Canada, in 1986 there were over 780,000 convictions for speeding - over two-thirds of all convictions under the Highway Traffic Act.[22] Enforcing speeding laws uses a large amount of police resources and yet barely covers the highway system. In the U.S. it is estimated that there are 190 miles of highway for every on-duty patrol officer.[23] Moreover, increased enforcement is often concentrated on the better roads - the very roads that tend to be safer. The present system of defined speed limits is simple to operate and fits the needs of any quota system that exists in a police department. It also encourages the use of policy radar, which measures speed, not danger. It encourages the police to go after the easy cases and locations which are often the least dangerous and where people understandably increase their speed, sometimes referred to as "fishing holes". It also encourages police to catch people where there is not much traffic, so that the speeder can be easily isolated, and not to bother with dangerous speeders weaving from lane to lane in heavy traffic. How effective is the criminal process in controlling speed? A number of studies have tested the effect of a police cruiser on the side of the highway.[24] Hauer and others have shown that the effect of a police car is dissipated a few miles away. In

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[21] W. Haddon, (1974).

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[22] Ontario Motor Vehicle Accident Facts, 1986, 60.

[23] U.S. Transportation Research Board, (1984) 13 and 147. The estimate was based on highways that were subject to the 55-mph limit.

[24] D. Shinar and A.J. McKnight (1985) at 392. E. Hauer, F.J. Ahlin, and J.S. Bowser, (1980).

other words, there is a distance halo operating in both directions of the highway, and there may also be a short- term time halo effect operating for a few days after enforcement. There have also been studies of the effect of an increase in enforcement on a large segment of a highway system. California, for example, increased enforcement in 1982 on five heavily travelled interstates by allocating an additional $1.3 million for overtime enforcement. Compliance improved by 5% - from 78.2% who disobeyed the law to 74.7%. Similar results have been found in other studies, but when the patrol officers were removed, reductions in speed quickly disappeared.[25]

Even on the assumption that sanctions against speeding violations influence driver behaviour, the ultimate question must be still be addressed of whether speeding is a significant cause of injury-producing accidents. The data on this question is quite mixed. Following the introduction of the 55 m.p.h. speed limit by the U.S. federal government in 1973, following the OPEC oil crisis, the accident rate decreased for 1974. However, this seems to be in part explained because of a decrease in exposure through less driving activity, although when measured against the distances driven, the decrease in accidents and fatalities was still found in some studies to be significant.[26] On the other hand, a 1986 study by the Brookings Institution found that in the post-embargo years the 55 m.p.h. speed limit does not seem to have had a large effect upon total deaths.[27] Perhaps reinforcing this view is the Ontario experience where speed limits were not reduced until 1976. Ontario also showed a major decrease in fatalities in 1974, even though the speed limit was 70 m.p.h. In 1976 speed limits in Ontario were reduced from 70 to 60 m.p.h., and deaths showed another major decrease, but it is difficult to separate speed reduction from the introduction of mandatory seatbelt use laws in that year. The fact that fatalities fell on all types of road in 1976, even ones whose speed limits were not changed, indicates that speed may not have been the key consideration. In 1987, the U.S. Congress passed legislation permitting states to increase the speed limit to 65 m.p.h. on rural expressways. As of April 1988, 40 states had raised the speed on rural interstates to 65 m.p.h. One recent study claims that deaths rose by 52% on freeways over a three month period from May 1987 to July 1987 in the 22 states that had raised their limit at that time. But this does not tell us how many more drivers there were on interstates than before and how many persons switched from less safe roads, where the speed was still 55 m.p.h., to interstates. In fact, the evidence is consistent with greater safety: although deaths rose in the 22 states from 296 to 450 on the interstates, they dropped from 4830 to 4350 on other highways in these states. Overall, highway traffic deaths dropped in the states that had raised the speed limit.[28]

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[25] U.S. Transportation Research Board (1984), 147. See also D.T. Campbell and H.L. Ross, (1968).

[26] U.S. Transportation Research Board (1984), 140-1; J.H. Hedlund (1985), at 8-9.

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[27] R.W. Crandall, H.K. Gruenspecht, T.E. Keeler, and L.B. Lave, (1986) at 65, 67.

Of course, reducing speed limits should, in theory, reduce the frequency and severity of accidents. The higher the speed, the slower the reaction time to a crisis, the longer it takes to stop, and the greater the impact and damage if there is a crash. However, low highway speed may cause drivers to pay less attention to their task (an example of risk compensation?), and may cause more passing and variance in speed than might occur if the speed limit were higher. Low highway speeds will also require more driving time, with consequently greater possibilities of fatigue and drowsiness. Variance in speed is a very important factor in the relationship between speed and accidents. A number of studies have found that the greater the absolute deviation from mean traffic speed the higher the accident rate.[29] This suggests first that speed limits should not be set so low as to encourage massive violations and higher variance in speed, and secondly, suggests that enforcement activity and severity of sanctions should be targeted on drivers who are guilty of substantial deviations from mean traffic speeds.

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[28] Insurance Institute for Highway Safety, Status Report 22, no. 14 (26 December 1987) 1. See also Status Report 23, no.3 (14 March 1988) 7; Status Report 23 no. 7 (9 July 1988) 3; Status Report 23 no.8 (13 August 1988) 1 and 24 no. 1 (28 January 1989) 1.

[29] U.S. Department of Transportation, (1982) 17-2, 17-6 See also E. Hauer, (1971).

(c) Drunk Driving

Criminal sanctions are the main form of regulation directed at reducing traffic accidents involving drunk drivers.[30] Enormous resources are devoted to enforcing criminal sanctions against drunk driving. An American estimate suggests as many as 1.8 million drunk driving arrests in the U.S. a year.[31] In recent years, increasing emphasis has been placed on the moral dimensions of the use of criminal sanctions against drunk driving, and governments and interest groups have consciously tried to criminalize drunk driving, largely by increasing the severity of sanctions, so that it is not perceived as a commonplace, low stigma folk crime, in the manner of other traffic offences, such as speeding.

The structure of most criminal sanctions against drunk driving facilitates enforcement through requirements for mandatory supply of blood or breath samples and the use of an objective standard of liability based on scientific evidence of a driver's blood alcohol concentration (BAC). After the introduction of widely publicized per se criminal sanctions in Britain in 1967 and Canada in 1969, reductions in alcohol-related fatal accidents were observed in both countries, although they eventually returned to original and indeed higher levels.[32] These reductions can be explained as a product of drivers increased perceptions of the risk of punishment if they drove after drinking. They failed in the long-run because the perception of risk eventually wore off reflecting more realistic perceptions of the probability of apprehension and punishment. The introduction of per se laws in both countries did not increase the severity of punishment, and in many contexts reduced it. Moreover, studies tend to suggest that the number of drunk driving charges, within some range, is not related to reductions in alcohol-related accidents and that the arrest rates can be doubled without necessarily reducing alcohol-related accidents.[33] This may in part, reflect a low likelihood of apprehension (estimated in some studies to be as low as only one chance in approximately every 500 to 2000 impaired trips), even during peak enforcement activity.[34] Studies suggest that most drunk driving blitzes, such as Toronto's Reduce Impaired Driving Everywhere (RIDE) programme or Alberta's CHECKSTOP programme, which uses spot checks involving random stopping and questioning of drivers, does not seem to result in less drunk driving, as measured by the percentage of randomly selected drivers with illegal BAC's, or significant reductions in reported accidents.[35] This finding seems also consistent with the well-known evaluation by H.L. Ross of the Scandinavian experience.[36] On the other hand, one enforcement technique that seems to increase more durably perceptions of the likelihood of apprehension is extensive use of random breath testing. When such testing was introduced in the Australian state of New South Wales, approximately one million breath tests were administered to a driving population of three million during each of the first three years of its implementation. The programme was also accompanied by extensive publicity designed to emphasize the certainty and severity of punishment. Recent evaluations of the programme suggest that over the first three years of its implementation, fatal accidents involving alcohol were reduced on average 21% each year, and fatal accidents between 11:00 p.m. and 3:00 a.m., a high risk period for drunk driving, were reduced by over 40%.[37] In terms of sanctions, the most effective sanction appears to be significant license suspensions,[38] rather than mandatory jail sentences or expensive long term educative or rehabilitative treatment.[39] License suspension operates primarily by reducing driving activity but it may also increase the care taken when suspended offenders continue to drive illegally.

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[30] Despite some apparent recent reductions, drunk driving remains the most important identifiable fact in fatal traffic accidents. In the United States in 1980, 50.1 per cent of fatally injured drivers tested for alcohol had blood alcohol concentrations (BACs) of over 100 mg/100 ml, and in 1983 46.4 per cent had such BACs: J. Fell, (1985) 452. In 1980 in Canada, 47.9 per cent of fatally injured automobile drivers tested for alcohol had BACs over 80 mg/100 ml; in 1983, 42.6 per cent; in 1985, 41.3 per cent; D. Beirness _et al._, (1985); G. Haas _et al._, (1985) Table A-2; A. Donelson _et al_., (1985). The presence of alcohol in these fatal accidents does not necessarily mean that drunk driving 'caused' the crash. Traffic accidents are the result of many interactive conditions, and the most effective means of prevention is not always one that addresses the primary causal determinant of the accident.

[31] W. Mercer, (1984).

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[32] H.L. Ross, (1973); B. Carr et al., (1975) 679 at 683; L.W. Chambers et al., (1975) 689 at 693. Similar results were observed after Maine's passage of a per se sanction: R. Hingson et al., (1987).

[33] During the Phoenix ASAP, arrests for drunk driving were increased between 60 and 75 per cent, yet only 29 per cent of a sample interviewed believed that their chances of being stopped by the police after drinking and driving were high. These perceptions were, in fact, realistic, as, even during peak enforcement, drunk driving arrests represented only 2.9 per cent of the estimated number of all the licensed drivers in the city. See T. Clay and P. Swenson, (1978) 134, 136; W. Mercer, (1984) 119; W. Mercer, (1985).

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[34] Liban _et al_., (1987) at 164; R. Borkenstein, (1982), H.L. Ross, (1989). A Canadian study based on night-time roadside surveys estimated the risk of apprehension to be 1 in 514 impaired trips or 1 in every 2,575 impaired kilometres: J. Lawson, as quoted in E. Vingilis and V. Vingilis, (1987) 22. One American study assessed the probability of arrest to be 1 in 200 impaired trips but was based on the unrealistic assumption that all available police officers will watch for drunk drivers: G. Beitel _et al._, (1975) 36.

[35] Liban _et al_., at 165ff.

[36] H.L. Ross, (1984); H.L. Ross, (1975).

However, beyond a sanction-oriented approach, as we will see below, raising the minimum drinking age seems to reduce alcohol-related accidents among the affected age groups, and use of less punitive compliance strategies that enlists the aid of commercial and social servers of alcohol, parents and employers in preventing drinking and driving seems to have some promise. Moreover, some attention to environment-centred factors seems warranted. For example, various forms of roadway and vehicle design features seem to have some potential for reducing both frequency and severity of alcohol-related traffic accidents. For example, road design features such as raised rumble strips on median lines may prevent accidents, as they counter the depressive effects of alcohol on the senses of drivers. One California study suggests that placement of large "Wrong Way - Go Back" signs on both sides of off ramps facing wrong way drivers can be very effective in reducing wrong way crashes, the majority of which are alcohol-related.[40] Automobile design features that lessen the severity of injuries will, of course, reduce the damage sustained in alcohol related accidents, especially because those impaired by alcohol seem more susceptible to trauma.[41] Breath test or performance interlocks can now be added to vehicles, either to prevent driving or to trigger an automobile's lights and horn as a warning if a car is driven after the driver has failed a preliminary or performance test.[42] The costs and political hazards of mandating any design features that reduce mobility are formidable,[43] but such interventions can reduce exposure of drunk drivers and their victims to harm without relying on preventing the combination of drinking and driving through sanctions alone.

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[37] J. Kearns et al., (1987) 429-30. For a very useful survey of random breath testing in Australia and other issues relating to traffic accidents, see R. Homel and P. Wilson, (1987).

[38] R. Hagan, (1978).

[39] P. Saltzberg and S. Paulsrude, (1984); R. Voas, (1986).

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[40] I. Johnston (1987). See also T. Ranney and V. Gawron, (1986).

[41] T. Anderson and D. Viano (1987).

[42] See Voas, (1988) 334ff. Nine American states have laws authorizing judges to require ignition interlock devices: Status Report 24 no.1 (28 January 1989).

[43] See J.L. Mashaw and D.L. Harfst, (1990).

III LICENSING

Licensing is a flexible form of administrative regulation that can be used to impose closer surveillance on conduct and to demand higher standards of conduct than can be obtained through the use of criminal or civil sanctions alone. Licensing techniques can be used in the traffic safety context to control the entry of drivers, to survey and record driver misconduct, and to control and sanction driving activity. Licensing, as a means both to control entry and to enforce exit in response to post-licensing behaviour, is related to the use of education to influence driver behaviour. Education can be required as a condition of obtaining a license and as a post-licensing treatment under the threat of license suspension.

A major set of licensing and related policies pertain to young drivers, particular teenagers. The following graph, which describes the Alberta experience but which is representative of most other industrialized societies,depicts the extent to which young drivers, both male and female, but particularly male, are over-represented in traffic accident statistics.

AGE AND SEX OF DRIVERS INVOLVED IN
CASUALTY COLLISIONS, Alberta 1989
COLLISION RATE PER 1000 LICENSED DRIVERS

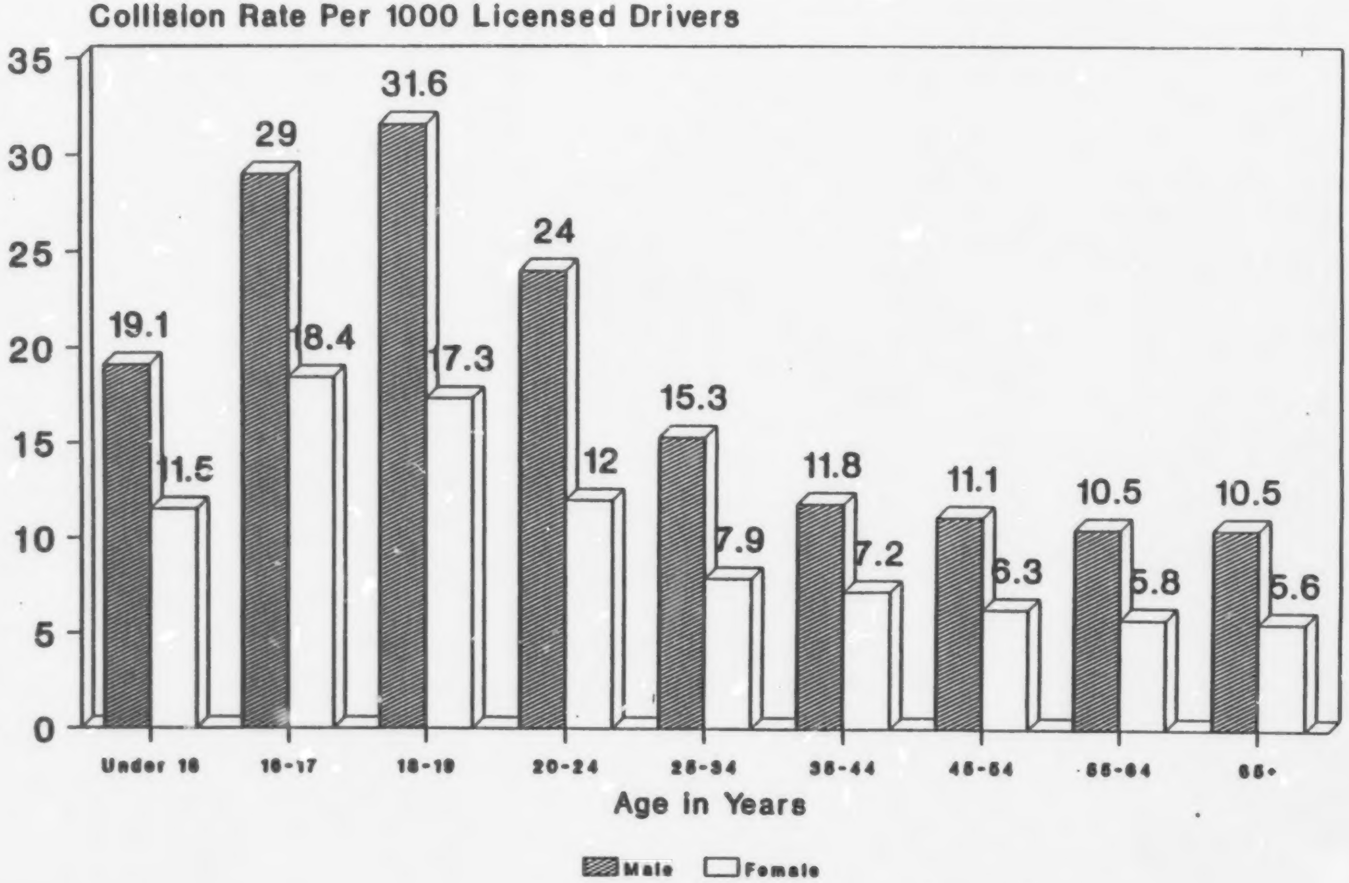

Figure 5

It is not clear whether the over-representation of young drivers in accidents can be explained primarily through their inexperience with driving or through behavioural and environmental facts such as aggression, immaturity and peer pressure specific to young people. To the extent that driving inexperience contributes to young drivers' accidents, interventions that reduce teenage driving exposure will have substantial offsetting effects through postponement of driving experience. To the extent that immaturity and related factors such as desire for and perceptions of risks[44] contribute to young drivers' accidents, interventions that limit teenagers' exposure will be more effective in reducing traffic accidents by preventing or reducing the driving activity of some of our most dangerous drivers. It is likely that both the inexperience and immaturity hypotheses have some explanatory value. Thus, interventions that target young drivers can prevent accidents, but there will be some offsetting effects when teenagers begin to drive at an older age.

Not surprisingly, the empirical evidence seems to indicate that raising the minimum age for obtaining a driver's license can significantly reduce traffic accidents in the age group that cannot obtain a license and while there will be some increase in traffic accidents at the higher age threshold, this seems unlikely to offset the safety gains through restricting the driving activities of younger drivers.[45] Research also seems to indicate that there are considerable potential safety gains through graduated licensing programmes that impose strategic restrictions on the driving of all new drivers and that do not focus only on those who are recorded by the police as involved in convictions or accidents.[46] Driving restrictions under such graduated licensing programmes can include night-time and/or weekend curfews, requirements that adults accompany young drivers, prohibitions on young drivers transporting other teenagers, and lower levels of prohibited blood alcohol concentrations or fewer moving violations or demerit points as a trigger for license suspension for young drivers.[47]

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[44] See B.A. Jonah, (1986) and R. Naatanen and H. Summala, (1976) 91-9 on the role that young drivers' desires and perceptions of risk play in traffic accidents. See D. Stewart and R. Sanderson (1984) 12, on the disproportionate accident risk for both young drivers and inexperienced drivers with less than eleven years of driving experience; see generally M. Wilson and M. Daly, (1985); W. Wiegers, (1989).

Although some studies suggest that those who take high school driver education have fewer accidents than those who do not, most studies find that aggregate increases in high school driver education are associated with increased licensing of young drivers and increased accidents amongst this age group.[48] High school driver education, by facilitating early licensing, results in more young people being exposed to the risks of driving without the educational programmes supplying them with skills that compensate for the accident risks presented by their increased exposure. For example, when driver education was no longer offered in some Connecticut high schools, a 75% reduction in the licensing of 16 and 17 year olds was observed, with a similar reduction in reported accidents among that group.[49] The skills that young drivers learn in driver education e.g. parallel parking, are probably more helpful in passing road tests for licensing than they are in avoiding accidents e.g. actual driving in poor weather.

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[45] A. Williams et al., (1983).

[46] See generally, D.R. Mayhew and H.M. Simpson, (1984).

[47] D.F. Preusser et al., (1984); A.J. McKnight et al., (1984) as reported in Mayhew and Simpson (1984); L. Robertson, (1981).

[48] L. Robertson and P. Zador, (1978); A. Lund et al., (1986).

With respect to the legal minimum drinking age, the consensus of empirical studies has been that the reductions made in the drinking age in the U.S. in the 1970's were associated with increases in youthful traffic fatalities,[50] and that conversely recent increases in the minimum legal drinking age have reduced automobile accidents among affected groups.[51] While it has been argued that a higher drinking age merely postpones the dangerous period in which inexperienced drinkers drive,[52] the body of the empirical evidence does not support the view that the safety gains are by any means fully offset.

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[49] L. Robertson, (1980).

[50] P. Cook and G. Tauchen, (1984); see also P. Whitehead et al., (1975); G. Bako et al., (1976); C. Liban et al., (1987) 159 at 169ff. See generally A. Wagenaar, (1983).

[51] A. Williams et al., (1983); M. DuMouchel et al., (1987); H. Saffer and M. Grossman, (1987).

[52] M. Males, (1986).

As to post-licensing control, the empirical evidence as to the efficacy of warning letters for drivers with poor records of traffic violations[53] and/or driver improvement courses required as a condition of license continuance is relatively unconvincing.[54] In a wide range of contexts, license suspension appears to be the most effective intervention. License suspension acts as an effective traffic safety measure through the threat of its imposition, by reducing driving activity and perhaps even by increasing the care that a suspended driver takes when driving illegally. Greater attention should probably paid to the use of short-term license suspensions. By reducing the severity of license suspension, this intervention can be imposed more frequently on a wider range of drivers. In most evaluated studies, license suspensions have proved more effective in reducing accidents than more costly educational or rehabilitative programmes.[55] However, it is important not to overstate the likely impact on accident rates of license suspension regimes. For example, licensing demerit point systems which attempt to identify drivers who present an above-average accident risk nevertheless only apply to a small minority of drivers who are likely to have accidents in the future. For example, one study of prior violations of a sample of drivers fatally injured in automobile accidents found that more than 50% had no traffic convictions in the three years prior to the fatal crash and that an additional 25% had only once such conviction. Only 5% of those fatally injured had more than three convictions.[56] In another study, it was found that three male drivers with multiple convictions would have to be removed from the road for three years in order to prevent one accident, and 4.4 similar female drivers would have to be removed to prevent one accident over the same period.[57] Thus, again, it is important to stress the difference between sanctions that change behaviour (which the threat or actuality of license suspension clearly does), and the effect of sanctions on the accident rate.

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[53] R. McBride and R. Peck, (1970); A. Donelson and D. Mayhew, (1987) 33ff.

[54] A. Lund and A. Williams, (1985).

[55] D. Preusser _et al._, (1976); R. Peck _et al._, (1985).

IV REWARDS

Rewards have not been widely used as a form of intervention designed to induce changes in driving behaviour. However, some empirical studies suggest that providing incentives for seatbelt use, such as signing pledge cards and becoming eligible for a chance at a sweepstake prize significantly increases usage rates.[58] Also, some mixed evidence suggests that providing a free one year extension of a driver's license if there have been no accidents or violations the previous year reduces the accident rate among the affected group.[59] It has also been suggested that safe driving could be linked with state or provincial lotteries by a province or state for example giving a violation-free or accident-free driver one or more lottery tickets, perhaps upon license renewal. While this evidence is fragmentary, psychological theory generally supports the view that the availability of small incentives for behavioural changes operate as forms of positive reinforcement and over time induces internalization of the desired behavioral changes.[60] There seems to be room for potentially productive experimentation with a range of reward-oriented techniques in the traffic safety field in addition to penalties and sanctions.

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[56] L. Robertson and S. Baker, (1975).

[57] R.C. Peck et al., (1970), 243 at 272. Likewise, Burg, in a study of California drivers, concluded that if all drivers with one or more accidents in a three-year period were removed from the road, 19.8 per cent of all drivers would be removed in order to eliminate 29.6 per cent of accidents over the second three-year period. If only drivers with two or more accidents were removed, 3.9 per cent of all drivers would be taken off the road to eliminate 8.0 per cent of all accidents over the next three years; if all drivers with three or more accidents were removed, only 0.08 per cent of drivers would be affected but only 2 per cent of accidents would be prevented. See A. Burg, (1970) at 63. These calculations are based on the assumption that no driving will occur during the period of suspension, whereas it is known that many drivers will suspended licences continue to drive.

V MOTOR VEHICLE SAFETY DESIGN

With the enactment by the U.S. Congress of the National Traffic and Motor Vehicle Safety Act of 1966, which created what has become the National Highway and Traffic Safety Administration

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[58] J.G. Cope, W.F. Grossnickle, and E.S. Geller, (1986) 250.

[59] G.J.S. Wilde and P.A. Murdoch, (1982) at 884-5; R. Harano and D.E. Hubert, 1974.

[60] G.J.S. Wilde and P.A. Murdoch (1982); see also Wilde, (1986) at 388ff.

(NHTSA), whose first administrator was William Haddon, a range of safety standards have been promulgated for new motor vehicles. Some of the standards are directed to reducing the frequency of accidents, while others are directed to reducing their severity. Six major occupant protection categories account for roughly two-thirds of the cost of safety regulation (excluding the bumper standard, which is mostly intended to reduce motor vehicle body damage): interior protection (e.g. padded dashes), head restraints, energy absorbing steering systems, penetration resistent windscreen glass, seatbelt installation, and side door beams. Dual breaking systems account for most of the cost of the accident prevention standards. These seven categories of standards cover more than three-quarters of the entire cost of safety regulations imposed by NHTSA (excluding bumper standards).[61] In recent years, NHTSA has increasingly shifted its emphasis from regulation by standards to regulation by recalls, in part because of difficulties encountered in justifying technology-forcing standards on judicial review and despite the dubious safety returns from mass recalls.[62]

A number of NHTSA assessments and external studies,[63] typically undertaken by engineers, have attempted to estimate the savings in fatalities and bodily injuries from these standards.

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[61] R.W. Crandall, H.K. Gruenspecht, T.E. Keeler, and L.B. Lave, (1986), 51.

[62] See J.L. Mashaw and D.L. Harfst, (1987); Mashaw and Harfst, (1990).

[63] Discussed in J. Claybrook and D. Bollier, (1985).

Substantial savings have generally been reported and have been relied upon as vindicating the effectiveness of this class of safety countermeasure. However, as noted early, a major challenge to the conceptual and causal discreteness of the categories of first and second collisions, or pre-crash, crash, and post-crash phases of accidents, which provided the epidemiological underpinning for MHTSA's standard-setting mandate, was posed by Sam Peltzman, a University of Chicago economist in a highly controversial article published in 1975.[64] Peltzman postulated that by reducing the consequences of the second collision i.e. the severity of an accident, through safety regulations, driving intensity would be increased as drivers took more risks in order to achieve the same trade-off that they had demanded prior to regulation between expected accident costs and benefits from conserving time on the road. This hypothsis reflects the theory of risk compensation or risk homeostasis that continues to agitate traffic safety research over a broad range of issues.

Peltzman set out to test his hypothesis empirically in two ways. First, a time series analysis was undertaken whereby an equation was fitted to fatality data from 1944 to 1964. Extrapolating from the variables that appeared best to explain fatality rates over this period, Peltzman predicted fatality rates over subsequent years in the absence of motor vehicle safety regulation. His predicted fatality rates almost exactly tracked the actual fatality rates with vehicle safety regulation. While occupant fatality rates fell somewhat, fatality rates for pedestrians, motor cyclists, and cyclists rose by an equivalent amount. Increased driving by young drivers and an increased incidence of drunk driving offences are identified by Peltzman as evidence of increased risk taking offsetting reduced costs of accidents. Cross-sectional analysis was also undertaken by Peltzman to test whether states with a higher proportion of newer cars with mandated safety features reported lower fatality rates than states with a higher proportion of pre-regulation vehicles. No such effect was found.

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[64] S. Peltzman, (1975).

Peltzman's findings have been strongly contested by other researchers. The latest study of the impact of motor vehicle safety regulation on fatality and injury rates, recently published by the Brookings Institution and undertaken by Crandall, Gruenspecht, Keeler, and Lave,[65] raises serious doubts about Peltzman's hypothesis, at least in its limiting form, while acknowledging more modest risk compensation effects. While the study reaches harsh judgment on the net economic effects of fuel efficiency and emission regulations, it reaches a highly favourable conclusion on the effects of safety regulation, finding that regulation may have reduced fatalities by as much as 40% since the inception of the programme and may entail an annual reduction of fatalities of as many as 23,000 - substantially higher than most previous positive studies had claimed. Having discovered positive and substantial benefits from safety regulations the Brookings researchers then investigated whether benefits exceeded costs - irrelevant in Peltzman's analysis, given a finding of zero benefits. They found that benefits substantially exceeded costs, except on the most pessimistic estimates of benefits and costs. They acknowledge that their data suggests only that total benefits appear to be greater than the total costs of safety improvements in cars, not that the marginal benefits of every safety regulation exceed its marginal costs. With respect to airbags, they estimate annual costs to be between $2.1 billion and $4.2 billion and benefits to occupants between $3.3 billion and $16.2 billion. Blomquist criticizes these and similar estimates for failing to take account of risk compensation effects, and to place a cost on time, inconvenience, and disutility associated with use of the system, and thus concludes that estimates of net social benefits are substantially over-stated.[66] Nevertheless, as noted earlier, passive restraint systems for front-seat occupants will become mandatory in the U.S. by 1993 unless there are further delays in implementation.

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[65] Crandall et al. (1986).

VI HIGHWAY SAFETY DESIGN

The design of highway systems obviously entails a complex mix of objectives. Historically, traffic engineers have seen as their first priority designing highway features that produce and maintain a smooth flow of traffic so that highway systems can move as large a volume of traffic as possible as quickly as possible.[67] Over the past two decades or so, much more attention has been paid to safety features of highway design. This appears to parallel the increased focus on vehicle design and to reflect the influence of views, such as those of Haddon, who have maintained that historically public policy has been excessively preoccupied with attempts to influence driver behaviour. Obviously, myriad features of highway design and maintenance may affect highway safety - road surface, road width, gradient, radius of curves, number of lanes, turning lanes, median strips, width of shoulder, run-off areas, lighting, stop signs, snow clearance, and so on. More than fifty highway design and maintenance elements have been identified as having some type of safety relationship.[68]

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[66] G.Blomquist, (1987), chapter 4.

In a trenchant critique of road safety design - both the established road system and new additions to it - Hauer argues that its history has been characterized by "a reign of ignorance".[69] Hauer is highly critical of the tendency of traffic engineers to follow established manual guidelines uncritically and to avoid independent (non self-interested) empirical evaluations of particular safety treatments, thus avoiding the risk that present practices may have to be changed radically and the existing stock of highways suddenly declared sub-standard. Even where findings indicate a positive relationship between safety and particular highway improvements, these do not account for the costs of these improvements. Given a limited budget available for expenditures on highway improvements, it is obvious that not all improvements that may reduce accident rates can be undertaken. Choices must be made; a system of priorities must be established. In identifying particular design problems or potential problems, typically efforts are made by highways engineers to identify locations exhibiting an abnormally high level of accidents. Merely counting accidents is likely to turn up mostly high density areas of highway, relative to lightly travelled stretches of highway. Obviously abnormally high must be defined relative to some index in order to be meaningful. Typically, the index will be accidents per hundred million vehicle miles or, in the case of intersections, per million entering vehicles across the provincial highway system, to which a similarly defined accident rate in the location in question can be compared.[70] This so-called "black-spot" approach to location identification sets priorities solely by reference to relative accident rates, thus ignoring relative costs of reducing accident rates in different locations. In addition, the abnormally high level of accidents in the period under scrutiny may be largely a random event or be explained by transitory factors e.g. such as weather or construction in the area, and not carry any larger significance.

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[67] G.M. MacKay, (1982).

[68] K.C. Sinha and K. Hu, (1986) 31. For a detailed review of research on highway safety design, see US Department of Transportation, Federal Highway Administration, (1982); see also OECD, (1986), chapter 12.

[69] E. Hauer, June 1987; Hauer, (1988).

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[70] S.R. Lynch, (1986) 80-4; M.J. Stelzleni, (1986), 152-8.

These difficulties in problem identification aside, a formal approach to the choice of optimal solution to the problem is likely to involve some form of cost-benefit analysis. Quantifying all the costs and benefits, direct and indirect, of any proposed solution to a problem location is obviously a daunting and often speculative exercise, especially with respect to benefits, which entails placing monetary values on intangibles like life and limb. A different limitation on the utility of cost benefit analysis is the partial context in which it is typically employed - the choice of optimal solution to a given high priority problem i.e. an identified black-spot. Ideally, all possible safety improvements in the entire traffic safety system should be simultaneously evaluated to determine how a predetermined budget for safety improvements can be invested so as to maximize the net present value of the resources to be invested. Perhaps, for example, in this more general or system-wide analysis, a large number of small improvements across the system would generate a higher net present value. These options seem unlikely to be revealed by the partial analysis of choice of solution to a pre-identified high priority problem. However, this kind of system-wide analysis is scarcely feasible every time a budgetary allocation must be made, or perhaps ever, given the formidable information demands that it implies.

In an ideal budgetary allocation process, ex ante estimates of costs and benefits should be informed by prior experience with similar interventions and should be validated by subsequent assessment of the actual impact of the solution chosen in the case in hand, so that estimates of likely effects in future cases may be revised appropriately. A number of methodological problems have been encountered in evaluation studies and partly account for divergent assessments of the impact of particular types of counter-measure.

Hauer has pointed out many time series studies tend to overestimate the impact of particular safety improvements because of regression to the mean. In other words, the post safety improvement reduction in e.g. fatalities may simply be a regression to the prior mean, and the increase in fatalities prior to the safety improvement may have simply been a random event.[71] Errors may be perpetuated or extended as illusionary safety gains become the basis for generalized road design guidelines that traffic engineers subsequently rely on in treating other accident sites. Cross-sectional studies that compare accident rates at various sites that are subject to different counter-measures and that are designed to evaluate the relative effectiveness of these different measures may yield distorted results reflecting selection bias if prior conditions, including accident rates, at each site are not adequately accounted for. For example, in comparing the effectiveness of four-way with two-way stop signs, while accident rates in the former case may prove higher than in the latter, this may not imply lesser effectiveness of the former, but rather the more severe nature of problem that led to the installation of four-way stop signs in the first place. Finally, in evaluating the impact of a counter-measure on the accident rate at particular treatment site, it may be important to take account of countervailing effects elsewhere in the highway system i.e. an "accident migration" effect. For example, one study found that while conversion of two-way to four-way stop signs in Philadelphia led to a 50% reduction in accidents at intersections controlled by four-way stop signs, the accident rate at other intersections in the area under study increased correspondingly.[72] Risk compensation or homeostasis proponents, such as Adams, rely on studies such as this to argue that highway safety improvements, like motor vehicle safety improvements, are likely to be largely consumed by drivers as performance improvements as they reinstate prior target levels of risk in their driving behaviour.[73] However, if vehicle safety regulations and highway safety improvements are ruled out as contributors to the dramatic secular decline in fatality rates in many industrialized countries (of the order of 3 to 4% a year on average over 40 years), this places an especially strong burden on proponents of the risk homeostasis hypothesis, like Adams and Peltzman, to offer convincing alternative explanations. To date, this burden remains undischarged.

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[71] E. Hauer, (1980); see also C. Abbess, D. Jarrett, and C.C. Wright, (1981) 535-42.

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[72] G.M. Ebbecke and J.J. Shuster, (1977) 644.

[73] J.G.U. Adams, (1985), chapter 4.

VII POST-ACCIDENT INJURY CARE

The final step in traffic safety counter-measures occurs after every other step has failed: the vehicle design did not avoid, or insulate the occupant from the impact, of the crash; the road design did not accommodate the error; and the driver failed to avoid it. Yet, even at this point, there is still room for intervention as emergency care and rehabilitation may mitigate the consequences of the accident.

The acceptance of emergency treatment as a large scale project for the lowering of fatalities resulting from trauma has a long military history. This experience has also influenced treatment of traffic accident victims and has increasingly redirected attention away from first-aid treatment at the site of the accident to trauma centres and rapid transportation of the victim to these centres. The expression used by trauma care personnel is "the golden hour", referring to the critical one hour period following injury. If an accident victim can be transported to a hospital or trauma centre within that time, chances of survival are considered excellent.[74] For example, in San Diego County, California, a study revealed that 13.6% of fatalities were preventable and that treatment of major trauma victims was sub-optimal in 32% of cases. After introduction of a trauma system in the county a check was done by the same audit group. The preventable death rate dropped to 2.7% and sub-optimal care was found in only 4.2% of cases.[75] Another study recently completed in Orange County, California, found that the preventable death category fell from 73% to 4% when patients were taken to a trauma centre rather than an conventional hospital.[76] While there has been little effort made to assess whether the costs of providing elaborate trauma services justify the benefits, some estimates claim that if the U.S. were to establish a system of trauma centres similar to that which West Germany has set up along it main autobahns since the early 1970's, where 90 per cent of the population is within fifteen minutes of a trauma centre, benefits would substantially exceed the costs.[77]

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[74] H. Mitchell, (1968).

Long-term rehabilitation, including physical, vocational, and emotional rehabilitation is the second aspect of post-crash care strategies. Rehabilitation attempts to restore the victim as closely as possible to the quality of life-style enjoyed before the accident. Two observations seem to emerge from existing empirical studies. First, for seriously injured accident victims, rehabilitation is likely to be very expensive. Second, it is likely to achieve substantial improvement in only a minority of cases.[78] Obviously, in those cases, the expenditures are likely to be worthwhile. It is often argued that governments have insufficiently invested in the provision of appropriate rehabilitation facilities that fully address physical, vocational, and emotional needs of injury victims.

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[75] Shackford et al (1986).

[76] D.D. Trunkey, (1983) 249.

[77] Ibid.

VIII THE ALBERTA TRAFFIC ACCIDENT PROFILE

In the light of the foregoing review of traffic safety policies, Alberta Traffic Collision Statistics collected by Motor Transport Services of the Alberta Department of Transportation and Utilities and compiled from police accident reports are suggestive of where traffic safety priorities might be focused.

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[78] US Department of Transportation, (1985) 107-12.

Table 1.1

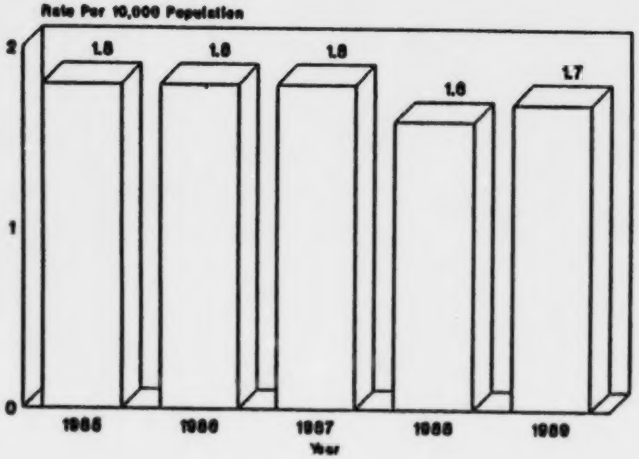
Alberta Traffic Collisions

1985-89

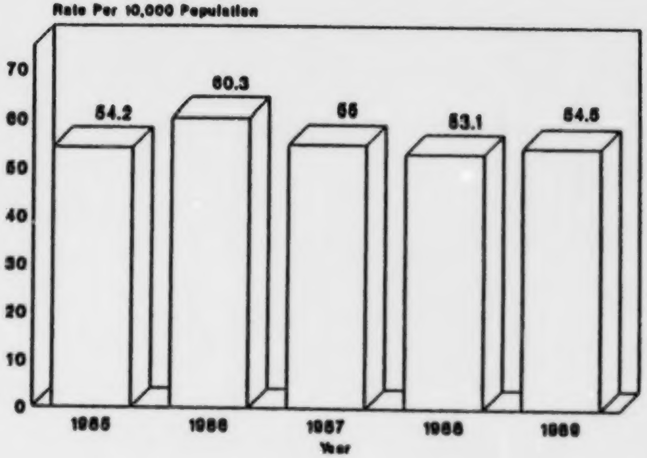
Severity of Collision	**1989**	**1988**	**1987**	**1986**	**1985**
Fatal Collisions	408	395	425	430	432
Non-Fatal Injury Collisions	13234	12728	13088	14383	12738
Property Damage Only Collisions	106722	97141	83980	82372	85224
TOTAL Reportable Collisions	**120364**	**110264**	**97493**	**97185**	**98389**
Number Killed	487	464	510	523	533
Number Injured	19753	18777	19809	22148	19855
TOTAL Number of Casualties	**20240**	**19241**	**20319**	**22671**	**20388**

Table 1.1 provides aggregate Alberta traffic collision statistics for the five year period 1985-1989, showing a fairly stable pattern in fatal collisions and non-fatal injury collisions, but a dramatic increase in property damage only collisions and total reportable collisions.

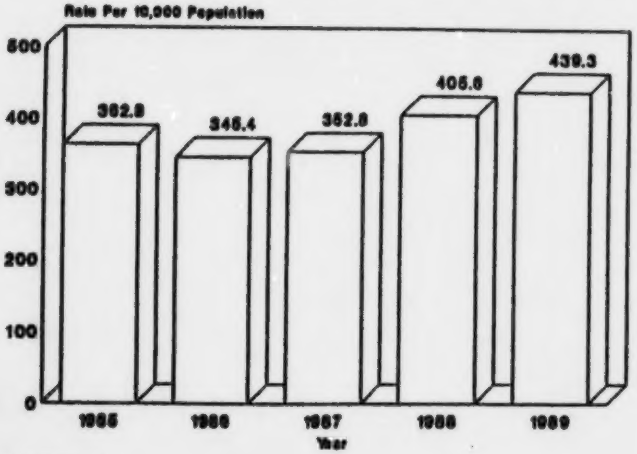
These trends are shown graphically as traffic collision rates per 10,000 population in the following graphs.



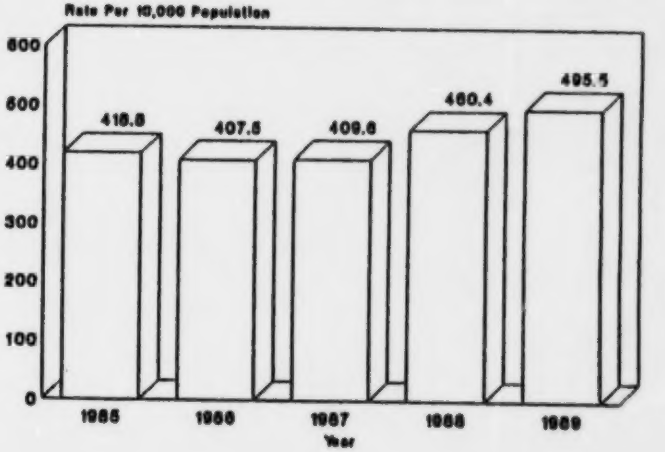
ALBERTA FATAL COLLISION RATES
1985-1989



ALBERTA INJURY COLLISION RATES
1985-1989



ALBERTA PROPERTY DAMAGE COLLISION RATES
1985-1989



ALBERTA OVERALL COLLISION RATES
1985-1989

Figure 1

In terms of provincial comparisons of casualty rates per 10,000 population, only one province - British Columbia - recorded a higher fatality rate than Alberta in 1989, although only two provinces - Prince Edward Island and Newfoundland - recorded a lower rate of non-fatal injuries.

The age and sex of drivers involved in casualty collisions expressed as a collision rate per 1,000 licensed drivers for 1989 were shown in an earlier graph. This graph reflects patterns in other jurisdictions with a heavy over-representation of drivers in the 16 to 24 age group and within that age group the heavy over-representation of males.

According to compilations from police accident reports, driver error or misjudgment was involved in 53.3 per cent of casualty collisions. The nature of these errors or misjudgments is shown below in Table 4.2

Table 4.2

ACTIONS OF DRIVERS INVOLVED IN CASUALTY COLLISIONS
1989

	Drivers in Fatal Collisions		Drivers Non-Fatal Injury Collisions		Total Drivers in Casualty Collisions	
Driver Actions	N	%	N	%	N	%
Driving Properly	274	42.2	9690	46.8	9964	46.7
Ran Off Road	88	13.6	1444	7.0	1532	7.2
Failed to Observe Traffic Control Device	54	8.3	1255	6.1	1309	6.1
Unsafe Speed	42	6.5	1221	5.9	1263	5.9
Following Too Closely	8	1.2	1203	5.8	1211	5.7
Left Turn Across Path	17	2.6	1053	5.1	1070	5.0
Failure to Yield Right-of-Way	25	3.9	1011	4.9	1036	4.9
Left of Centre	70	12.2	248	1.2	327	1.5
Improper Turn	3	0.5	323	1.6	326	1.5
Improper Passing	13	2.0	135	0.7	148	0.7
Backed Unsafely	-	-	130	0.6	130	0.6
Failed to Signal	-	-	15	0.1	15	0.1
Other	38	5.9	2522	12.4	2560	12.0
TOTAL Number of Drivers	**649**	**100.0**	**20701**	**100.0**	**21350**	**100.0**

For aggregate statistics covering both fatal and non-fatal injury collisions, running off the road, failing to observe traffic control devices, and travelling at unsafe speeds were the most frequently identified driver actions contributing to casualty decisions. However, if one looks at the statistics for fatal collisions, running off the road, unsafe speed, and driving left of centre are much more prominent factors. One might tend to infer that all three, but particularly the first and the third, are likely to be highly correlated with drinking and driving. For total casualty collisions, if one aggregates failure to observe traffic control devices, failure to yield right of way, and left turn across path, intersection violations assume considerable significance.

Table 6.1 below shows the location of collisions for 1989.

Table 6.1

LOCATIONS OF COLLISIONS
1989

	Fatal Collisions		Non-Fatal Only Collisions		Property Damage Collisions		Total Collisions	
Driver Actions	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**
Urban	123	30.1	9436	71.5	87696	82.2	97255	80.8
Rural	285	69.9	3798	28.7	19026	17.8	23109	19.2
TOTAL Number of Collisions]	**408**	**100.0**	**13234**	**100.0**	**106722**	**100.0**	**120364**	**100.0**

The striking feature of these statistics is the high percentage of fatal collisions that occur in rural areas - presumably often implicating the two factors noted in the previous Table.

Figure 8 below shows the degree of involvement of drinking drivers in casualty collisions from 1985-1989.

INVOLVEMENT OF DRINKING DRIVERS IN CASUALTY COLLISIONS
Alberta, 1985-1989

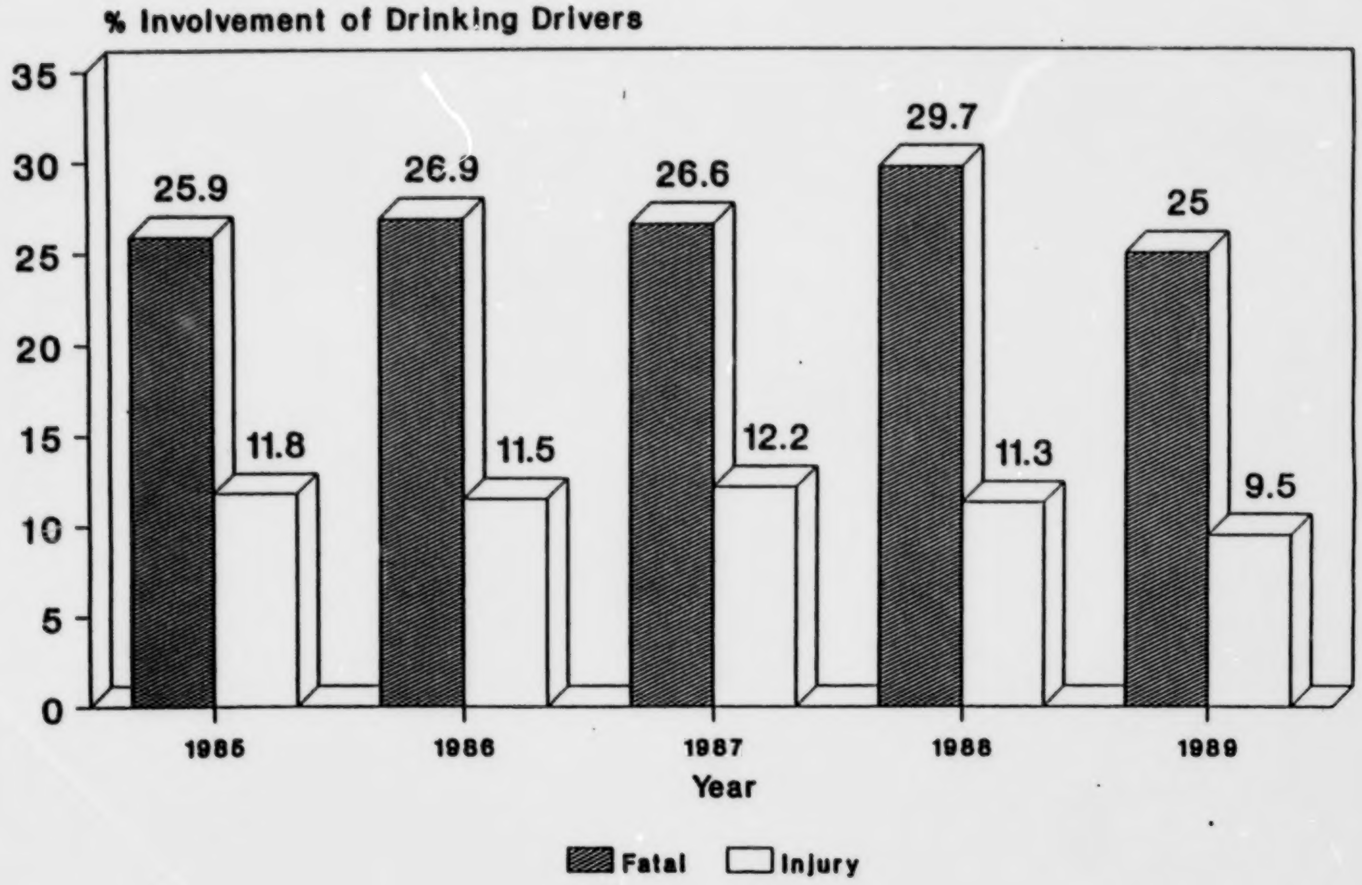


Figure 8

It will be observed that in almost 25 per cent of fatal collisions, drinking drivers were involved and this percentage has not significantly declined over the five year period from 1985 to 1989.

Figure 10 shows alcohol-involved casualty collisions by age and sex of drinking drivers for 1989:

AGE AND SEX OF DRINKING DRIVERS INVOLVED
IN CASUALTY COLLISIONS, Alberta 1989
COLLISION RATE PER 1000 LICENSED DRIVERS

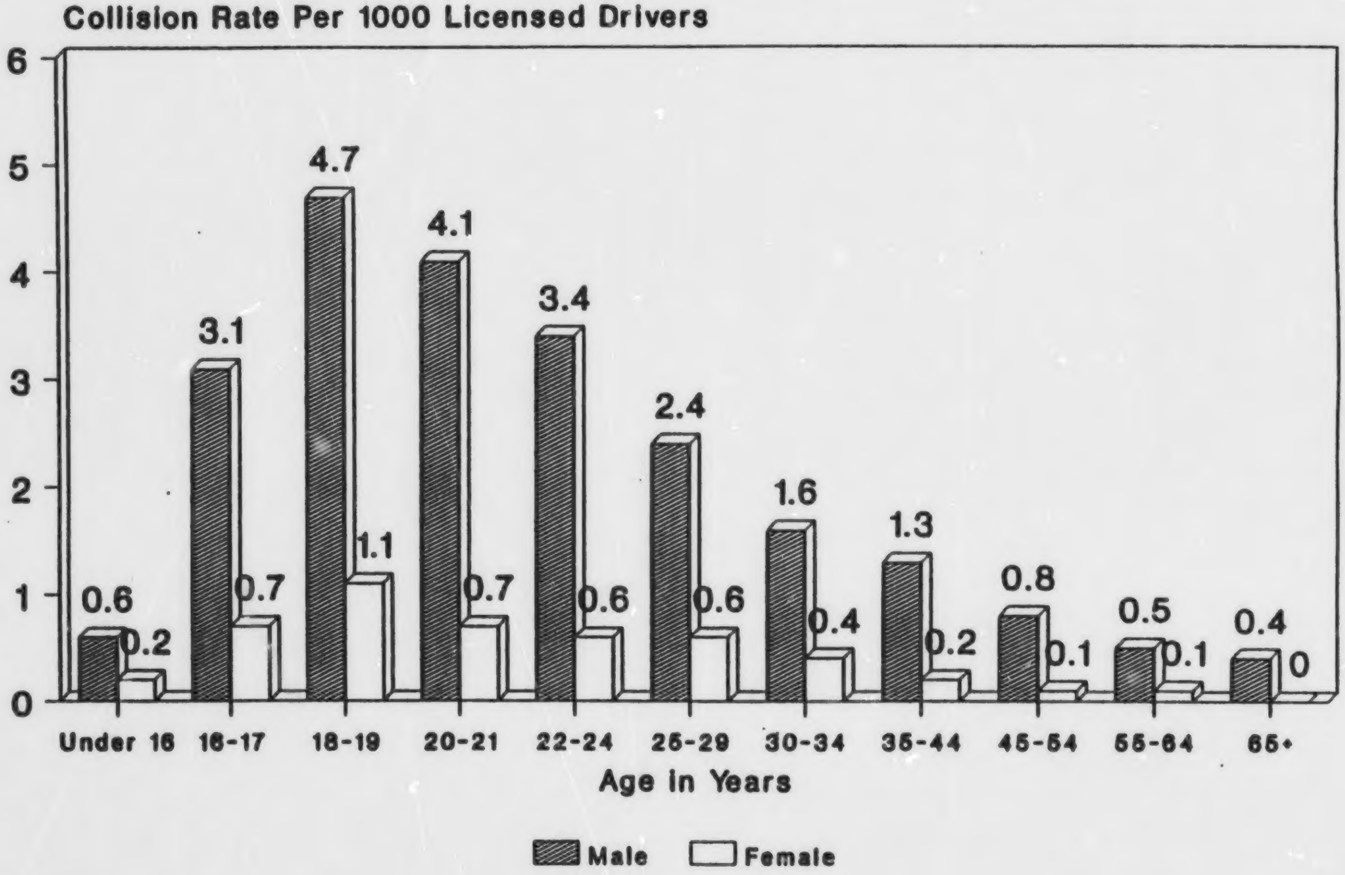
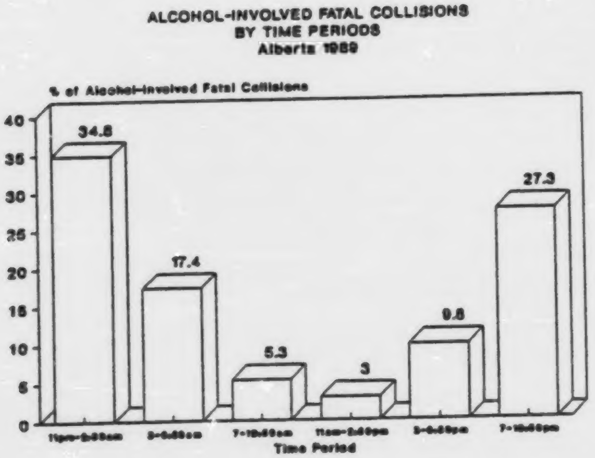


Figure 10

Of those collisions involving drivers who had consumed alcohol, there were five and a half times as many male drivers as female drivers. The majority were male drivers under the age of 30. In terms of involvement per 1,000 licensed drivers, males 18 to 21 years of age are more likely to have consumed alcohol prior to a casualty collision than any other age group.

Figure 11 below shows alcohol-involved fatal collisions by time period for 1989:



The following two tables from annual reports by the Alberta insurance industry to the Insurance Bureau of Canada provide summary statistics on auto insurance claims for the period 1984-88:

Table IV

ACTUAL LOSS RATIO EXPERIENCE

PRIVATE PASSENGER AUTOMOBILE - EXCLUDING FARMERS

ALBERTA

COVERAGE	POLICY YEAR	CARS INSURED (1)	ACTUAL PREMIUMS EARNED (2)	LOSSES AND LOSS ADJUSTMENT EXPENSES INCURRED (3)	CLAIM FREQ. PER 100 CARS INSURED (4)	AVGE. COST PER CLAIM (5)	RATIO OF LOSS & LOSS EXPENSE TO PREM. EARNED (6)	NUMBER OF CLAIMS (7)
BODILY INJURY AND PROPERTY DAMAGE	'84	1,126,284	201,710,447	146,290,566	5.3	2,445	73	59,822
	85	1,144,319	196,188,728	180,588,871	5.7	2,787	92	64,790
	86	1,207.510	209,120,911	223.562,717	5.7	3,256	107	68,654
	87	1,235,382	220,890,866	232,868,951	5.4	3,467	105	67,163
	88	1,259,613	230,736,938	251,259,439	5.4	3,696	109	67,988
MEDICAL PAYMENTS	'84							
	85							
	86							
	87							
	88							
ACCIDENT BENEFITS (EXCL.MED.)	'84	1,118,870	15,059,031	10,112,311	.6	1,410	67	7,170
	85	1,137,112	15,341,857	10,897,240	.7	1,402	71	7,771
	86	1,203,302	16,086,067	14,027,460	.7	1,620	87	8,659
	87	1,234,740	16,860.884	14,292,169	.7	1,577	85	9,062
	88	1,254,712	17,137,801	15,199,011	.8	1,563	89	9,723
ALL PERILS	'84	57,385	13,447,445	6,693,907	18.0	650	50	10,301
	85	55,474	12,453,142	7,782,310	23.8	589	62	13,212
	86	61,223	14,026,649	9,783,336	24.3	658	70	14,863
	87	64,266	15,141,531	13,892,695	29.1	742	92	18,723
	88	65,852	15,828,245	16,290,381	31.5	786	103	20,734
COLLISION	'84	750,662	125,677,514	75,324,099	7.1	1,409	60	53,463
	85	767,762	121,777,276	83,887,420	7.8	1,402	69	59,832
	86	808,060	129,055,174	94,659,580	8.0	1,473	73	64,244
	87	836,677	134,012,193	98,135,217	7.4	1,577	73	62,242
	88	854,573	137,397,688	114,290,646	7.7	1,739	83	65,711
COMPREHENSIVE	'84	739,920	60,762,474	47,747,130	16.8	383	79	124,560
	85	782,988	61,768,073	47,188,732	17.7	341	76	138,269
	86	846,413	67,028,045	51,420,048	16.3	373	77	137,739
	87	884,719	71,952,719	87,298,534	19.1	518	121	168,659
	88	920,178	75,189,084	88,401,001	18.8	512	118	172,592
SPECIFIED PERILS	'84	230,592	5,909,195	3,564,052	1.5	1,038	60	3,433
	85	208,448	5,168,286	2,496,293	1.3	904	48	2,761
	86	183,034	4,521,070	2,377,578	1.5	889	53	2,675
	87	161,179	4,065,282	4,808,839	3.0	989	118	4,860
	88	140,557	3,296,277	4,151,688	2.8	1,055	126	3,936
TOTAL	'84		422,566,106	289,732,065			69	
	85		412,697,362	332,840,866			81	
	86		439,837,916	395,830,719			90	
	87		462,923,475	451,296,405			97	
	88		479.586,033	489,592,166			102	

Table IX

PRIVATE PASSENGER AUTOMOBILES - EXCLUDING FARMERS TREND OF LOSS COST EXHIBITS, THIRD PARTY LIABILITY

II. BODILY INJURY LIABILITY LOSS STATISTICS

	Policy Year	Number of Cars Insured (1)	Claim Frequency per 100 Cars Insured (2)	Average Cost per Claim (3)	Loss Cost per Car Insured (4)
ALBERTA	1984*	1,126,284	.53	12,314	65.32
	1984	1,136,334	.58	13,207	76.95
	1985*	1,144,319	.61	14,406	87.53
	1985	1,171,209	.62	15,714	98.09
	1986*	1,207,510	.65	16,747	109.16
	1986	1,227,314	.68	16,542	111.88
	1987*	1,235,382	.67	16,750	112.46
	1987	1,244,011	.68	17,064	116.10
	1988*	1,259,613	.68	17,290	117.86

PRIVATE PASSENGER AUTOMOBILES - EXCLUDING FARMERS TREND OF LOSS COST EXHIBITS, THIRD PARTY LIABILITY

III. PROPERTY DAMAGE LIABILITY LOSS STATISTICS

	Policy Year	Number of Cars Insured (1)	Claim Frequency per 100 Cars Insured (2)	Average Cost per Claim (3)	Loss Cost per Car Insured (4)
ALBERTA	1984*	1,126,284	4.78	1,351	64.57
	1984	1,136,334	4.98	1,364	67.99
	1985*	1,144,319	5.05	1,391	70.28
	1985	1,171,209	5.09	1,447	73.74
	1986*	1,207,510	5.03	1,509	75.98
	1986	1,227,314	4.84	1,570	76.05
	1987*	1,235,382	4.77	1,596	76.05
	1987	1,244,011	4.74	1,665	79.00
	1988*	1,259,613	4.72	1,731	81.61

Policy years cover a fiscal-policy year statistical period; for example, "1988" consists of policies effected in the 12 months from July 1, 1987 through June 30, 1988.

The most striking fact to emerge from these tables is that both frequency and severity of bodily injury liability claims (not property damage liability, collision damage, or no-fault benefits) have dramatically increased over this period and account for most of the pressure on insurance costs.

A further dimension on bodily injury loss costs is dramatically illustrated from the table on page 144 below summarizing a random sample of 577 bodily injury claims in Alberta for 1990. Of the 577 claims, 10 large claims for serious injuries or fatalities (1.7% of the claims in the sample) accounted for almost 40% of total loss costs for the sample. Of these 10 claims, particulars provided by insurers disclosed that 9 of the 10 involved male defendants, 6 of these defendants were young males (aged 17, 18, 20, 21, 23, 24), 7 of the 10 claims arose out of accidents in rural settings and 5 involved alcohol impairment (3 of the 5 involving young males).

What do all these statistics tell us?

1. Over-representation of young drivers in the 16 to 24 age group in accident statistics is dramatic, and warrants serious consideration of various of the exposure-limiting strategies associated with graduated licensing reviewed earlier in this chapter (e.g. curfews, restrictions on transporting teenagers, requirement of an adult presence). As well, serious consideration needs to be given to raising the minimum legal driving age to e.g. 18 and the minimum legal drinking age to e.g. 21.
2. The heavy representation of drinking driver involvement in fatal accident collisions and the relative constancy of this statistic over time suggests that, despite programmes like CHECKSTOP, more needs to be done in this area. The Australian experience suggests that all drivers who are stopped as part of the CHECKSTOP programme should be tested at least informally for alcohol consumption e.g. with an alcohol sensor, prior to a formal BAC test. For such a programme to be effective, again the Australian experience suggests that it needs to be run year-round and needs to be accompanied with dramatic publicity emphasizing the nature of the programme and the consequences for drivers who are found to be over the legal limit. Again, the statistics on time of day and urban-rural locations where alcohol involvement in fatal collisions is found to be most frequently present suggest that targeting on the night-time hours, especially between 11:00 p.m. and 3:00 a.m., and rural highways, would be likely to have the greatest impact.
3. While the Alberta Traffic Collision Statistics do not

provide detailed numbers, the 1989 report notes (p. 74) that most of the fatally injured occupants were not restrained by seatbelts or other similar devices at the time of collision, although the majority of occupants who were restrained at the time of collision sustained only minor injuries. While Alberta has only recently introduced mandatory seatbelt use laws, it seems imperative that these be vigorous enforced and that enforcement policies to that end be accompanied by appropriate publicity. Enforcement should be primary and not secondary (i.e. not dependent on other violations); the CHECKSTOP programme could well be extended so that it focuses not only on drinking drivers but on drivers who have not buckled-up.

4. Unsafe speed emerges as a significant category of driver error, particularly in fatal collisions, and following similar recent Ontario actions, fines for speeding might appropriately be doubled, with attendant publicity campaigns developed to underscore both the safety and financial consequences of excessive speed. In enforcing speeding laws, it is important that police activities focus on drivers whose speed involves high degrees of variance from mean traffic speeds on given highways rather than succumbing to easy ticketing of drivers through radar control whose speed is close to the mean speed of the prevailing stream of traffic.

5. These measures, if adopted collectively, may seem like tough medicine for dealing with traffic safety problems. But the unpalatable fact must be faced that the costs of automobile insurance under any system -tort/third party liability

insurance or some form of first-party no-fault regime - cannot be significantly reduced or even contained unless the underlying trends in frequency and severity of traffic accidents are sharply ameliorated.

CHAPTER 4

TORT REFORM: REDUCING DAMAGE AWARDS

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I INTRODUCTION

In contrast to public law regulatory reform which for the most part has as its goal a reduction in the frequency of automobile accidents, private law tort reform aims at reducing the size of the awards for damages that are ultimately borne by the tort law liability system. Typical tort reforms, which have been much discussed in other tort contexts such as medical malpractice[1], include reducing victims' recovery in tort for non-pecuniary losses like pain and suffering, abolishing the traditional collateral benefits rule, mandating structured judgments, reducing pre-judgment interest, and eliminating (or at least reducing) third party survivors' claims in the case of fatal accidents. In the discussion to follow, we shall examine these reforms in this order, an order that roughly reflects their decreasing potential for savings in the overall funding of bodily injury claims in tort law.

II REDUCING RECOVERY FOR NON-PECUNIARY LOSS

(a) Eliminating Damages for Pain and Suffering

In chapter two we noted that there were two key principles that animated tort law in general, namely that accident victims could only recover if they could prove that their injuries or losses were caused, in whole or in part, by the fault of another, and that, given proof of fault, accident victims could seek full redress for all of the damages they suffered, including both pecuniary and non-pecuniary losses. While the fault principle clearly limits the possible liability payments that might otherwise have to be made in tort law (e.g. as compared to a system of strict or absolute liability), the principle of full redress for both pecuniary and non-pecuniary loss expands liability payments beyond what some tort reformers think is appropriate. Indeed, something of the general sense that recovery for non-pecuniary losses should be more limited than for pecuniary losses probably motivated the Supreme Court of Canada to put a cap of $100,000 on recovery for pain and suffering in 1978.[2] More vigorous reformers of tort law would have us limit recovery for such losses even further, or at least limit such recovery in a way quite different from a cap.

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[1] See P. Danzon, Medical Malpractice (1985) for some good discussion and empirical assessment of these reforms in the context of medical malpractice.

That there is some scope for substantial savings in the cost of bodily injury claims for automobile accidents if non-pecuniary damages are limited in some way is evidenced by the fact that in Ontario in 1986 almost half (45.6%) of the aggregate amount of all such claims leading to some judgment or settlement was accounted for by non-pecuniary damages.[3] In Alberta the experience has been made the same; in 1990, for example, non-pecuniary damages made up 47.7% of all bodily injury claims.[4] Figures for pain and suffering damages as a proportion of overall damage awards appear to be even higher in the U.S.,[5] but this probably reflects the fact that there is a less systematic use of a cap on such awards in the U.S. In any event, absent some second order effects (eg. on the frequency of accidents), it seems reasonable to think that insurance premia could be reduced by just over one quarter if tort recovery for non-pecuniary losses were eliminated entirely. (This figure is lower than the percentage that non-pecuniary loss is of aggregate bodily injury claims because bodily injury claims are only 58.5% of overall loss costs[6]).

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[2] Andrews v. Grand and Toy Alberta Ltd., [1978] 2 S.C.R. 229

[3] Report of Inquiry into Motor Vehicle Accident Compensation in Ontario hereafter (The Osborne Commission Report), Vol 1 (1988), at ch. 7

Is there any kind of justification for such a reform beyond the fact that it might reduce liability insurance premia? It must be remembered that non-pecuniary losses are no less real as losses for their being non-pecuniary in nature. Thus, even if such losses are not paid for in liability judgments and, therefore, not insured for in liability insurance, the losses are still being borne by someone, namely the uncompensated victim.

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[4] J. Cheng (Eckler Partners Ltd.) Alberta Bodily Injury Survey (1991) A, (Summary table appears as Appendix A to this chapter)

[5] See W.K. Viscusi, "Pain and Suffering in Product Liability Cases: Systematic Compensation or Capricious Awards?" (1988) 8 Int. Rev. L. and Eco. 203

[6] The figure is for 1986 in Ontario; See The Osborne Commission Report, Vol. II, supra n. 3, at 593. Loss costs per vehicle, and the exact relationship that these bear to premia, are discussed in some detail in ibid.,, Vol. I, at ch.7, especially at 245, 275 and 278.

Looked at in this light, the insurance premia savings seem a great deal less attractive; they simply represent a transfer from those unfortunate enough to be the victim of an automobile accident to those fortunate insureds who happen never to be involved in one. Do the other criteria we have identified as appropriate for the assessment of tort law and its alternatives, i.e. those criteria other than premia savings like deterrence and victim compensation, provide any different kind of judgment on the matter?

The goal of effective deterrence hardly seems to be served by eliminating a faulty tortfeasor's liability for a particular kind of loss. Again, the point must be that these losses are genuine losses, and we do not want to avoid them any the less simply because they are non-pecuniary in nature.[7] Thus, the deterrence goal argues much more for a victim's full recovery for non-pecuniary losses than it does for any kind of elimination of such recovery, and it would even find fault with the system of partial recovery under a cap that is currently operating in Alberta and elsewhere in Canada.

What about the victim compensation perspective? Again, since these losses are genuine, full redress for the injury seems to require full compensation even if the injury is non-pecuniary in nature. Thus, the victim compensation perspective also seems to demand that we make no distinction between pecuniary and non-pecuniary losses, not even the one mandated by the Supreme Court in 1978. However, the matter is more complicated if we appreciate that both the victims who recover for non-pecuniary losses, and the defendant drivers who are held liable for such losses, form a common insurance pool. In such a situation the potential victim of an automobile accident can look forward to paying an actuarially fair price for the right to recover for non-pecuniary losses in the premium she pays for automobile liability insurance. Thus, full compensation ex post for non-pecuniary losses as well as pecuniary ones is something one pays for, or insures for, ex ante. This insurance perspective casts the purely compensatory idea of full recovery for non-pecuniary loss in a slightly different light.[8] The hard fact of the matter is that individuals typically do not choose to insure, at least in first party insurance schemes, for the recovery of non-pecuniary losses.[9] The emotional distress one feels in the loss of a child or a spouse, for example, is not something for which the payment of money under an insurance scheme makes any real difference. Put differently, this kind of loss, unlike a paradigmatic pecuniary loss involving, say, medical expenses or the loss of earnings, does not, just in virtue of its happening, increase our demand or need for money in any way.[10] Thus, it is not the sort of loss for which we will typically be willing to give up money in an ex ante world where we have not yet had an accident (i.e. the world in which insurance premia are paid) in exchange for the right to receive money in a world where the accident actually occurs ex post. Thus, from an insurance perspective, full compensation for non-pecuniary losses is excessive in that it provides more compensation to victims than what they are willing to pay for. This may justify, therefore, some sort of tort reform that eliminates, or at least reduces,[11] a victim's right to recovery for non-pecuniary losses in automobile accidents.

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[7] M. Trebilcock, "The Social Insurance-Deterrence Dilemma of Modern North American Tort Law: A Canadian Perspective on the Liability Insurance Crisis" (1987) 24 San Diego L.R. 929

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[8] For good discussion of the insurance perspective on non-pecuniary loss, see R. Cooter, "Towards a Market in Unmatured Tort Claims", (1989) 75 Virginia L.R. 383. Also, see P. Cook and D. Graham "The Demand for Insurance and Protection: The case of Irreplaceable Commodities", (1977) 91 Q.J. Econ 143; and S. Rea, "Non-pecuniary Loss and Breach of Contract", 1982 11 J. of Leg. Stud. 35

[9] A systematic review of the evidence on this is to be found in P. Danzon, "Tort Reform and the Role of Government in Private Insurance Markets", (1984) 13 J. of Leg. Stud. 517

It must be recognized, however, that any attempt to justify a reduced recovery for non-pecuniary losses on the insurance or victim compensation perspective runs headlong into what the deterrence goal requires. Optimal deterrence requires that the defendant at fault pay the full cost of her activity; anything less, such as paying victim plaintiffs for negligently caused pecuniary losses only, will mean less than adequate deterrence. Nor is it an obvious answer to this insurance-deterrence dilemma[12] to have the defendant pay some equivalent regulatory fine to the state rather than tort damages for non-pecuniary losses to the victim.[13] If these fines are insurable, then the costs of their insurability are still being passed on to tort victims who operate in the same insurance pool, only now the tort victim would not recover ex post for non-pecuniary losses despite having paid towards their costs ex ante. On the other hand, if these regulatory fines were an uninsurable form of liability, then tort victims would not be paying to fund their possible recovery for non-pecuniary losses, but at the same time a defendant motorist, if judgment proof and uninsured for non-pecuniary losses, may not face the real prospect of having to pay the full costs of her activity. In other words, the insurance-deterrence dilemma would raise its head again.

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[10] More accurately the economist would say the loss does not increase our marginal utility for money. See Cooter, supra n.8

[11] For an argument that only a reduction rather than a complete elimination of recovery for non-pecuniary losses can be justified on "insurance" grounds, see B. Chapman and M. Trebilcock, "Punitive Damages: Divergence in Search of a Rationale" (1989) 40 Alabama L.R. 741, at 772-74.

(b) Structuring a Scheme of Limited Recovery for Pain and Suffering

Even if one accepted the argument, either on victim compensation or optimal insurance grounds, or out of a concern for the savings in insurance premia that would be involved, that one should at least limit recovery in tort for non-pecuniary losses like pain and suffering, there still remains the issue as to how properly to structure such a limitation scheme. At present, non-pecuniary losses seem to form a significantly greater percentage of the aggregate amount of small claims than they do of the aggregate amount of large claims. In Ontario, for example, in 1986 non-pecuniary losses comprised 70.5% of the aggregate of all bodily injury claims between $1,000 and $10,000; for claims between $10,000 and $75,000 and for claims over $75,000 the analogous figures were 47.2% and 27.0% respectively.[14] In Alberta in 1990 the percentage figures for the same three categories of claims were 83.1%. 57.1% and 18.2%, reflecting an even larger skew of non-pecuniary losses towards the smallest category of claims. [15]This last figure may only reflect the workings of the Supreme Court of Canada's 1978 cap on recovery for pain and suffering damages, but it raises the question whether the burden of tort cost containment within such a system of caps is not, somewhat inequitably, being borne more by those tort victims who are most severely disabled over a longer period of time, in particular the youngest who can expect to live longest with the disability, and is leaving the less seriously injured whose non-pecuniary loss lies entirely below the cap largely unaffected.

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[12] Trebilcock, supra n. 7

[13] The American Law Institute makes a suggestion like this in its report on Enterprise Responsibility for Personal Injury (1991), Vol II, at 213 (hereafter the ALI Report), although the ALI is not unaware of the difficulties involved with such a scheme.

An alternative to the cap system, is the floor or 'deductible' system, i.e. a system that would not allow recovery in tort for any claims for pain and suffering falling below some threshold amount (eg. $10,000).[16] This seems to be more a vertically equitable result than the cap system, and it would tend to remove from the tort system the bulk of the less significant pain and suffering claims (eg. claims for whiplash) which are presumably expensive to litigate considering the real stakes that are involved. The latter source of savings could either be captured as reduced insurance premia for everyone or, if a floor was combined with a cap, passed on as a benefit to the more seriously injured in that a more generous cap on recovery for non-pecuniary losses could then be allowed.

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[14] The Osborne Commission Report, Vol 1. supra n. 3, at 258-262

[15] Alberta Bodily Injury Survey, supra n. 4; and Appendix A of this chapter.

However, between a relatively high cap on awards for non-pecuniary losses and a floor below which no such awards would be available at all, there is still room for further tort reform and consequent savings in insurance premia. Moreover, there is good reason for thinking that such reform is required for ethical reasons. This is because in a cap system there is still some vertical inequity involved in the treatment of those victims whose recovery in tort is limited by the cap as compared to those victims whose claim lies between the floor and the cap and who are, therefore, quite unaffected by either. Some critics of the standard form cap system suggest that it should be replaced by a scale, (or even a schedule of standardized payments) according to which the amounts awarded under the cap for lesser injuries would be prorated downwards from the maximum amount that was available for the most serious cases of non-pecuniary loss until eventually the scale (or schedule) terminated at the floor level for such damages.[17] In that way there would be more vertical equity operating between victims with varying levels of disability over the scale between the floor and the cap. And, again, it would be possible, given the savings involved with such a scale, to provide for a more generous cap for the most serious cases of non-pecuniary loss.

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[16] This is recommended by the ALI Report, supra n. 13, Vol. II, ch. 8.

There is an advantage to achieving reduced liability insurance premia within the tort system by reducing the recovery for non-pecuniary loss that is worth emphasizing here. If one were to provide for an equal reduction in insurance premia by mandating some reduced victim recovery for pecuniary losses in tort law, then it is likely that potential victims of accidents would react by buying increased amounts of first party insurance to compensate for those possible losses in alternative ways (eg. through employer's disability plan). Thus, the savings in third party liability insurance would be largely offset by increased expenditures on first party insurance. But since individuals do not (as argued above) choose to insure for non-pecuniary losses, there would be no such offsetting reaction in the face of reductions in any allowed recovery for non-pecuniary loss. Thus, such reductions are much more likely to result in real savings in insurance premia, first and third party alike.

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[17] This is another recommendation in Ibid

III CHANGING THE COLLATERAL BENEFITS RULE

Collateral benefits are those benefits which are additionally available to a tort victim in virtue of the injury the victim has suffered. They include privately contracted for insurance benefits and employer provided disability plans, as well as such publicly provided income replacement schemes as unemployment insurance, social welfare benefits, and total disability pensions under the Canada Pension Plan. The traditional rule in tort law is that the availability of such benefits to a tort victim should not be taken account of in assessing damages for loss of earnings or earning capacity in personal injury cases.[18] It has been estimated that savings of around two percent of the total accident loss cost per private vehicle would result if this traditional rule were abolished and a collateral source offset rule introduced instead,[19] it is not surprising that after the elimination or reduction of recovery for non-pecuniary losses this is the next most frequently urged reform in tort law. The Osborne Commission recommended the legislative abolishment of the traditional rule in Ontario,[20] and nearly half of the U.S. state legislatures have introduced some sort of modification to it.[21]

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[18] Boarelli v. Flannigan [1973] 3 O.R. 69 (Ont. C.A.). But for some indication that the Supreme Court of Canada might be retreating from the traditional rule, see Ratych v. Bloomer (1990), 73 O.R. (2d) 385, although the scope of this recent retreat still remains to be determined.

[19] See The Osborne Commission Report, Vol 2, at 617. The two percent figure is the proportion that a $6.62 reduction is of the total $339.62 annual estimate of such loss costs.

[20] Ibid., Vol 1 at 438

The usual argument against the traditional collateral benefits rule is that an injured person should not be permitted to recover more than once for the same loss. Certainly there does seem to be evidence that the traditional rule results in such overcompensation. The Osborne Commission, for example, estimated that, in aggregate, Ontario motor vehicle accident victims were being overcompensated by about seventeen percent in 1987, a figure the Commission suggested was likely to underestimate the extent of the overcompensation problem.[22]

However, it is unclear from an insurance perspective why a potential tort victim would pay for the possibility of over compensation. Presumably, the rational insurance decision is to insure only for those losses which cannot otherwise be recovered in tort. This would reduce the costs of first party insurance to the insured tort victim as compared to what they would be under double recovery. However, such a scheme would effectively make tort law the first resort for injury compensation, something which, because of the expenses and uncertainties of tort litigation, may not be attractive to the insured. Even so, this only suggests that the insured would rationally choose to recover first from the collateral source and allow that source the right of subrogation against the tortfeasor for any possible tort damages. That too allows the motor vehicle accident victim to have cheaper first party insurance and avoids the problem of a victim receiving excessive compensation. Moreover, this combination of the traditional collateral benefits rule with a right of subrogation available to the collateral source (at least, if it is private) is, in principle at least, what is currently operating in common law jurisdictions like Alberta.

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[21] ALI Report, supra n 13, Vol. II, at 167

[22] The Osborne Commission Report, Vol 1, at 433

The puzzle, therefore, is why there is the excessive compensation of accident victims to which the Osborne Commission refers, an excess that suggests that the rights of subrogation are not being exercised in practice and that tort victims are receiving more compensation than they really want to pay for. On the one hand, the lack of subrogation may be due to numerous practical difficulties, such as determining what portion of a total settlement or award is properly payable to the collateral source.[23] That such determinations are expensive is evidenced by the fact that in Ontario, until the recent no fault reforms, the Ontario Health Insurance plan collected an annual (average) fee from the auto insurance industry rather than litigate its right of subrogation on an individual case by case basis.[24] On the other hand, it may also be that the allegations of overcompensation in the traditional rule are off the mark once one accounts for the fact that a tort victim's legal costs of pursuing a claim often go uncompensated. However, on the latter point, it seems better to compensate for these additional costs directly and explicitly than to do so indirectly and somewhat arbitrarily by way of the traditional collateral benefits rule.

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[23] For some discussion of these problems, see the ALI Report Vol 2, at 178

[24] Under the new no fault plan in Ontario, this fee is no longer collected by the Ontario Health Insurance Plan, something which explains at least some of the claimed for savings under no fault.

From a deterrence perspective, abolition of the traditional collateral benefits rule in favour of a collateral source offset rule is problematic. Under an offset rule, the effect of the tort victim having paid for a benefit from a collateral source is that the defendant tortfeasor's liability is reduced. As a first order effect, one should predict a consequent loss of deterrence incentives for the defendant and a consequent increased frequency of motor vehicle accidents. And as a second order effect, since the tort victim is effectively subsidizing the defendant by way of her first party insurance purchases, we should predict some reduction in the amount of such first party insurance that is ultimately purchased. Thus, it is unclear that in the long run there is much to be gained by abolishing the traditional rule, at least if a reduction in the aggregate costs of tort claims is the objective. At a minimum we should expect these gains to be significantly smaller in the long run than the fourteen percent of the cost of all bodily injury claims projected by the Osborne Commission, a projection that did not take into account this second order effect on the purchase of first party insurance.[25]

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[25] See supra n. 19

IV MANDATORY STRUCTURED JUDGMENTS

At common law, tort damages are typically awarded in a lump sum fashion. That is, the successful plaintiff is awarded a once-and-for-all sum which, when it is invested, will produce an income sufficient to meet, for example, the costs of future care or the lost future earnings for which it has been decided the plaintiff ought to be compensated. In addition to this, some jurisdictions permit the use of periodic rather than lump sum awards to the plaintiff so long as both parties to the litigation agree.[26] However, it has generally been accepted, and has now been recently reconfirmed by the Supreme Court of Canada,[27] that the plaintiff is entitled to receive his or her award in lump sum form, and that a court cannot mandate a series of periodic damage payments instead. This has prompted some tort reformers to suggest that legislation be passed to give the courts the power to mandate periodic or structured tort judgments.

The advantages of a scheme of mandatory judgments are said largely to be in the tax savings involved. Under existing tax law, which provides that damages for personal injuries are not taxable income, periodic payments of the damages are tax free.[28] By contrast, while payment of a lump sum of damages might be tax free, the income earned from that lump sum, once it is invested, is not. This suggests (and the suggestion has now been accepted by the Supreme Court of Canada[29]) that a lump sum damage award ought to be "grossed up" for tax, that is, that an additional sum be awarded to the plaintiff so that after tax the plaintiff is in a position to purchase the requisite future care that full compensation for her injury demands. The size of this gross up can be substantial, and at least one investigator of the phenomenon has estimated that, when awarded, it averages about thirty five percent of the total future care awards that are made.[30] Since a periodic payments scheme avoids any such tax implications, the argument is that awards could be lower and liability insurance premia saved if such schemes were made mandatory.

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[26] See, eg. Courts of Justice Act, 1984, S.O. 1084, c.11, s.129

[27] Watkins v. Olafson (1989), 61 D.L.R. (4th) 577 (S.C.C.)

[28] Ibid, at 586

One might ask, if the parties to litigation can save tax dollars this way, why do they not themselves voluntarily agree to a scheme of periodic payments? Why, in other words, does such a scheme have to be made mandatory if the requisite savings in tort liability are to be achieved? The answer lies in appreciating that if the plaintiff has a right to insist on the lump sum award with its gross up for taxation, then the plaintiff is in a position to bargain for a higher periodic damage award than what is required for her full compensation in any voluntary structured settlement. Thus, without the scheme being mandatorily imposed, one would expect any periodic payments to which the parties voluntarily agreed still to reflect to some extent the background tax implications of a lump sum award. Only a mandatory scheme of structured judgments would effectively remove the plaintiff's ability to threaten the defendant with her insistence on a large lump sum award with its gross up for tax and thus undermine her ability, within a voluntary structured settlement, to negotiate for, in addition to what is required for her full tort compensation, a large share of the tax savings that are involved. Thus, a scheme of voluntary structured settlement will not realize in full the tax savings that could be achieved for the parties (and for the defendant in particular) in a scheme of mandatory structured judgments.

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[29] Ibid, at 589

[30] See B. Feldhusen, "Mandatory Structured Judgments", (1988) 1 Canadian Insurance Law Review 1

It might be argued that eliminating the effects of the gross up for taxation by way of a tort reform mandating structured judgments is not a way to effect any real cost savings. Rather it might be suggested that the savings that are involved only reflect a transfer, or redistribution, from the taxing authorities (and, therefore, other taxpayers) to the defendant who now need pay no gross up for tax. However,this argument confronts at least the two following replies. First, the gross up for tax is most common in the case of lump sum awards for future care costs. In the case of lost future income, the general practice is to estimate the plaintiff's future pre-tax income and discount that to the present; in such a situation there is obviously no need additionally to gross the award up for tax.[31] However, in the case of a future care award, the taxing authority had no expectation before the tort occurred of receiving any tax monies from the plaintiff when the plaintiff was able to take care of herself. Why then should the taxing authority, after the tort, have any claim to tax the income received from a lump sum award for the costs of future care? Better is the award that, because of its structured form, avoids any such tax implications; taxpayers are no worse off, and the defendant's liability without the gross up is significantly reduced.[32] Second, the fact remains that if voluntary structured settlements are available to the parties, then taxpayers will not likely realize any tax revenues in any case. Rather, as suggested above, the plaintiff will negotiate within a structured settlement for some share of the defendant's savings in not having to pay a large lump sum grossed up for tax. Thus, whether the structured settlement is mutually agreed upon by defendants and plaintiffs, or whether it is mandated as a structured judgment by the courts, the redistribution from taxpayers to defendants and plaintiffs will occur anyway. The only difference is that a court mandated structured judgment has the advantage of avoiding the overcompensation of the plaintiff that is involved in the plaintiff's negotiated share of the tax savings enjoyed in a system of voluntary structured settlements. While this might suggest that the plaintiff is worse off under a mandatory scheme, the fact remains that in the motor vehicle accident context, plaintiffs and defendants are in the same liability insurance pool, and any excessive compensation ex post is compensation that a plaintiff will likely not want to insure for ex ante.

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[31] Ibid, at 17

[32] The alternative, i.e. of avoiding income tax as damage payments of any kind, including lump sum awards, lies with the Federal government.

V PREJUDGMENT INTEREST

Considerable time can elapse between an accident and the final disposition of a case. If the defendant is finally found to be liable for the accident this means that over this time the defendant has had the use of money which rightfully belonged to the plaintiff as damages. At common law, the defendant was not required to pay the plaintiff any interest on this money. This created an incentive for the defendant to delay the trial of an action as long as possible and, in the end, resulted in the systematic undercompensation of plaintiffs. In most jurisdictions, legislation requiring the payment of prejudgment interest has now been passed to remedy those problems. In Alberta, the relevant statute is the Judgment Interest Act.[33]

While it is now widely recognized that some sort of prejudgment interest should be paid to the plaintiff, there is still some controversy about the appropriate rate of interest that should apply and the date from which the interest should run. In Alberta, prejudgment interest runs from the date the cause of action arose which is the proper approach on either a deterrence or victim compensation perspective. However, some jurisdictions like Ontario, for example, only pay prejudgment interest on some damage claims (eg. unliquidated damages) from the date of the notice of claim.[34] This is designed to induce timely claims and to reduce the uncertainty defendants face in litigation. Related proposals that the plaintiff only be permitted to accumulate interest after she has provided the defendant with the requisite medical information are also designed to use prejudgment interest as an inducement to speed up proceedings.

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[33] Judgment Interest Act, S.A. 1984, c.J-0-5

In Alberta the prescribed rate for prejudgment interest is left to vary with the regulations on an annual basis.[35] In Ontario, by contrast, the Act prescribes that the rate is to equal the Bank rate (in the previous quarter) rounded up to the next highest percentage point, plus one percentage point. The resulting rate is roughly that charged to prime corporate borrowers and is, therefore, below the borrowing rate faced by individuals and above the rate that individuals can earn. Thus, the Ontario formula probably represents a necessary but reasonable compromise between on the one hand, a disadvantaged defendant who uses the money over the prejudgment interval at an investment rate below the prejudgment interest rate and, on the other hand, a disadvantaged plaintiff who might, over the same interval, have to borrow money at a rate above the prejudgment interest rate. However, the fact that in both Alberta and Ontario compound interest (or interest on the prejudgment interest) is not awarded is a systematic advantage for the defendant.[36]of It is better that prejudgment interest be compounded when general damages are determined. Not doing so is problematic from the perspective of both deterrence and victim compensation, and probably induces unnecessary delay by the defendant in legal proceedings.

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[34] Courts of Justice Act, S.O. 1984, c.11 s. 138 (i)(b)

[35] Supra n.33, at s.4(3)

A special problem arises in the case of awarding prejudgment interest on non-pecuniary damages. Since Lindal v. Lindal,[37] the Supreme Court of Canada has recognized that the 1978 cap of $100,000 on damages for pain and suffering needs to be indexed for inflation. In current dollars, therefore, the cap is now about $200,000. Should prejudgment interest be payable on these new indexed amounts at the same rate as for past pecuniary losses? The answer is no. The nominal rates of interest (eg. the Bank rate) discussed above include a component that already accounts for inflation. Thus, to award non-pecuniary damage at an inflated rate as in Lindal and, further, to award prejudgment interest at a nominal rate on such damages is to overcompensate the plaintiff for inflation and give her an incentive to delay final settlement of the case as long as possible. Alberta is the only province that seems to have recognized this problem in that it awards prejudgment interest on non-pecuniary losses at four per cent, presumably an estimate of a real rather than nominal rate of return.[38] While this approach is correct in principle, it is probably overly rigid to embed a four percent rule in the statute. The real rate of return is relatively stable over long periods of time, but it might vary significantly within the shorter prejudgment intervals. It might be better to allow for this variability by letting this prejudgment interest rate to be determined in the regulations. Second, it seems that four percent is a high estimate of the real rate of return. Historically, this rate is closer to three percent and the historical figure should be what the prejudgment interest rate on inflation-indexed non-pecuniary damages should approximate on average over the long run.

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[36] See supra n.33, at s.2(2)(b) (Alberta), and supra n.34, at s.138(3)(b) (Ontario)

[37] (1981), 129 D.L.R. (3d) 363

VI SURVIVORS' ACTIONS IN FATAL ACCIDENTS

At common law, surviving family members had no cause of action for the death of someone in the family. This apparent unfairness has been remedied in large part by legislation, and in Alberta in particular by the Fatal Accidents Act.[39] This Act allows a spouse, parent, child or sibling of the fatally injured person to bring an action for "those damages that the court considers appropriate to the injury resulting from the death".[40] Typically, these latter damages are for financial losses (eg. loss of support that the claimant might have expected from the after-tax income of the deceased), but the Act also prescribes a set of conventional $3000 awards for "bereavement" for a slightly more limited class of claimants (i.e. spouse, parents, or children of the deceased).[41]

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[38] Supra n.33, at s.4(1)

[39] Fatal Accidents Act, R.S.A. 1980, c.F-5

Would-be tort reformers argue that these fatal accident awards are costly, and that some limitations on recovery are justified as a way to save on motor vehicle accident insurance premia. However, it is difficult to give much credence to the claim. In the 1986 claims survey done for the Osborne Commission it was revealed that claims under the analogous legislation in Ontario accounted for only 5.4% of all bodily injury liability claims paid and not all of these were for fatal accidents.[42] Moreover, in approximately three quarters of these claims, the payments made were shared by no more than two relatives, something which suggests that the claims now made do not generally extend beyond immediate family members.[43] Furthermore, it should be noted that Alberta's list of possible claimants is already more restricted than Ontario's, and that its use of conventional awards for bereavement meets, to some extent, the reform idea that in cases of non-pecuniary losses it is better to prescribe a given amount than to have the proper figure as something that has to be litigated in each case. This is the same kind of thinking that pushes some tort reformers towards a schedule format for non-pecuniary damages in general.

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[40] Ibid, at s.8

[41] Ibid, at s.8

[42] Supra n.3, Vol 1, at 389

[43] Ibid, at 390

There is one procedural reform that might be helpful in Alberta. Under the current Act there is a prohibition against bringing more than one action in respect of the same subject matter of complaint. In this respect the Alberta legislation compares with the old Family Law Reform Act[44] which used to govern these fatal accident claims in Ontario. However, the feeling in Ontario was (and this was picked up by the Osborne Commission[45]) that this feature obliged plaintiffs to join other possible relatives to their claim, something that had the practical effect of encouraging claims of a relatively minor nature. Under Ontario's new Family Law Act, any relative can and must bring his or her own action. The likely effect of this is that trivial claims are not made and the high costs associated with these claims are reduced.

VII **SUMMARY**

The following table summarizes the effects of the various tort reforms on loss cost per private vehicle as estimated by the Osborne Commission based on its own Ontario claims survey. In the case of eliminating recovery for non-pecuniary loss, the effect of the reform has been calculated by multiplying the proportion of aggregate bodily injury claims that is accounted for (in 1986) by non-pecuniary losses by the proportion that such bodily injury claims are of overall loss costs.[46] The effect of changing the traditional collateral benefits rule to an offset rule is directly calculable from Osborne's own estimate.[47] The imposition of mandatory structured judgments on future care costs, which has the effect of eliminating a necessary gross up for tax, is also calculated by multiplying the proportion of future care costs which is made up of bodily injury claims by the proportion that these latter claims form of the total loss costs, and then multiplying that product by thirty five percent, the latter being the estimate that the gross up forms of total future care costs.[48] In the case of tort reforms relating to prejudgment interest and fatal accident claims, the effect on loss costs per private vehicle in Alberta are difficult to assess on the basis of the data from the Osborne Commission claims survey. This is because Alberta has already, to some extent, incorporated the reforms that the Osborne Commission discussed. For example, Alberta already uses a real rather than nominal prejudgment rate of interest for non-pecuniary losses, and the list of claimants who can recover for fatal accidents is already more limited than in Ontario. Thus, any measure of savings or loss cost per vehicle in Ontario under these sorts of reforms are likely to overestimate what is possible in Alberta. Subject to that caveat, however, and subject to the much more general warning that all such figures are only useful as very rough estimates of the relative magnitudes involved rather than as precise predictions of the effects of any given reform, the estimated impact on loss cost per private vehicle is as follows:

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[44] Family Law Reform Act, S.O. 1978, c.2, s.60(4)

[45] Supra n.3, Vol 1, at 391

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[46] Bodily injury claims form 58.5% of overall loss costs. See The Osborne commission Report, Vol II supra n. 3, at 593.

[47] Ibid, at 617

[48] See supra, text at n. ?.

Estimate of the Effect of Tort Reforms
on Loss Costs per Private Vehicle

Tort Reform		Proportional Effect on Overall Loss Cost
1.	No Recovery for Non-Pecuniary Loss	-26.7%
2.	Abolition of Collateral Benefits Rule	- 2.0%
3.	Imposition of Mandatory Structured Judgements for Future Care (i.e. elimination of tax gross up)	- .3%
4.	Reduced Prejudgment Interest (eg. to real rate on non-pecuniary loss	- 2.7% in Ontario; but significantly less in Alberta
5.	Reduced Fatal Accident Claims	not available, but likely to be small

These figures indicate that the only real source of savings in tort reform is to be found in the elimination of any recovery for non-pecuniary loss. However, this is by far the most controversial reform of the five on both deterrence and victim compensation grounds. The use of a floor along with the continued use of a (possibly more generous) cap on non-pecuniary losses might still allow for some of these premia savings, since a significantly larger proportion of the smaller claims is made up of claims for non-pecuniary losses. Moreover, it might be less controversial than the complete elimination of such recovery. However precise estimates of the effect of this more partial tort reform cannot be made on the basis of the data produced in the Osborne Commission Report.

APPENDIX A

ALBERTA BODILY INJURY SURVEY
BREAKDOWN OF JUDGEMENT/SETTLEMENT
CLOSED IN 1990

	All Claims %	Claims Under $10,000 %	Claims Between $10,000 & $75,000 %	Claims Over $75,000 %
Loss of Employment Income	14.6	7.6	21.4	11
Out of Pocket	5.8	3.7	6.3	6.4
Non-Pecuniary*	47.7	83.1	57.1	18.2
Future Employment Income	18.6	0.2	3.4	45.1
Future Care	3.3	0.2	0.7	7.8
Gross-up for Tax	0.8	0	0	2
Fund Management	0.2	0	0	0.6
Party and Party Costs*	5.2	4	6.5	4.5
Prejudgment Interest	3.9	1.2	4.7	4.5
Total	100.1	100.0	100.1	100.1
Number of Claims	577	443	124	10
Amount of Claims	$6,942,301	$1,459,138	$2,835,645	$2,647,518

*Note: Party and Party Costs for Claimants Represented by Counsel Have Been Adjusted if Entered as Zero

Source: J. Cheng (Echler Partners Ltd), Alberta Bodily Injury Survey (unpublished 1991).

CHAPTER 5

ENHANCED ADD-ON NO-FAULT

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I DESCRIPTION OF THE MODEL

The Osborne Commission's Proposal[1] will serve as our exemplary model for an enhanced add-on no-fault regime. In this model, the tort system remains in place and open to suits in the automobile accident context, although it is reformed in various ways. Possible reforms of tort law were discussed above in chapter 4, but it is important to note one particular reform in this model: the abolition of the collateral source rule[2]. This reform means that collateral benefits in the nature of indemnity payments[3], such as unemployment insurance benefits and employment disability benefits, are deducted from the relevant components of a tort award (and we assume from the relevant component of no-fault benefits payment[4]) made to the injured person[5] . In other words, tort and no-fault compensation are both secondary to compensation through collateral benefits. As well, any no-fault benefits are deducted from the tort damage award.

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[1] The Honourable Mr.Justice Coulter A. Osborne, Report of Inquiry into Motor Vehicle Accident Compensation in Ontario, vol. 1 (Toronto: Ontario Ministry of the Attorney General and the Ministry of Financial Institutions,1988).

[2] The rule from Boarelli v. Flannigan, [1973] 3 O.R. 69 that collateral benefits should not be taken into account in assessing damages for loss of earnings or earnings capacity in personal injury cases.

[3] That is, payments which are intended to compensate for a pecuniary loss, not payments of a predetermined amount upon the occurrence of some specified event regardless of pecuniary loss.

[4] Osborne mentions this only in the case of no-fault employment benefits.

[5] Osborne,vol I,441.

The minimum coverage for third party liability (bodily injury and property damage) would remain set at $200,000.[6]

The following no-fault benefits[7] would be provided through mandatory, appropriately risk-rated[8] first-party insurance to all individuals injured in automobile accidents, without exception. The left hand column indicating the Schedule B no-fault benefits under the former Ontario regime,which was closely comparable to the current Alberta regime, is for purposes of comparison.

Table 5.1

FORMER ONTARIO NO-FAULT (Schedule B) Benefits	**OSBORNE PROPOSAL NO-FAULT BENEFITS**
Rehabilitation $25,000 per claim	$500,000 per claim maximum Time limit: 10 years or 20 years less victim's age, [9] whichever is longer.
Long-Term Care No Benefits	$500,000 per claim maximum. Family members may be compensated for care of the injured person. Benefits not to exceed the monthly cost of group residence which might reasonably accommodate victim's needs.

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[6] Osborne, vol. I 583.

[7] Osborne, p.583-4.

[8] An exception is the case of motorcycle premiums. See below.

Disability Income Benefits	
1) Employed 80% of gross wages, to a maximum of $140 per week. Benefits for a maximum of 104 weeks unless totally disabled No waiting period	80% of gross income, to maximum of $450 per week Secondary to collateral benefits, except U.I.C.[10] benefits. Age: 16 or over 7-day waiting period
2) Deemed to be Employed To qualify, claimant must have worked 6 out of last 12 months. As above	Claimant must have worked 6 out of the last 12 months 80% of gross income, to maximum of $450 per week. Age: between 18 and 65 60-day waiting period
3) Students No benefits.	Elementary school: $1,000 for loss of school year; $340 per week at age 19 if still disabled and not attending school. Secondary school: $2,000 for loss of school year; $340 per week at age 19 if still disabled and not attending school. College/University: $4,000 for loss of school year; $340 per week when no longer entitled to loss of school year benefits.
Homemaker Disability Benefit $70 per week for a maximum of 12 weeks	Child Care In case of injury to provider of child care: $200 per week plus $50 per week per dependent child to maximum $350 per week. No waiting period. Payable for 2 weeks without proof of expenses incurred; then payable with proof of reasonable expenses incurred.
Household Care house-keeping, meal preparation, grass cutting etc. N/A	$50 per week payable on basis of reasonable expenses incurred

Death Benefit For death of head of household or spouse: $10,000 plus $1,00 for each dependant child beyond first. For death of dependent child $2,000	For death of head of household or spouse of head of household: $25,000 plus $10,000 more for each dependent. For death of a dependant child $10,000
Funeral Expenses $1,000	$3,000
	All benefits, except the death benefit, indexed once a year to annual consumer price index, subject to a maximum of twice the stipulated original benefit amount.

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II EVALUATION OF THE MODEL

(a) Deterrence/Prevention

The importance of the changes in accident deterrence resulting from the introduction of an enhanced add-on no-fault scheme depends upon the magnitude of the accident deterrence inherent in the tort law regime itself. This has been discussed above in chapter 2. What will be attempted here is an analysis not of the absolute size of the deterrence effects of the implementation of the Osborne model, but of the direction of these effects relative to the degree of the deterrence produced by the tort law system as a whole.

One would expect a number of deterrence effects to operate simultaneously under this model. One is a consequence of the fact that the third party insurer of the negligent driver will

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*9. The latter time period allows children under the age of 10 the extra time which they sometimes need to be rehabilitated.

10. Unemployment Insurance of Canada.

not be forced to cover the full cost of the other driver's loss, as it would in a traditional tort law regime. This is because in the case of a successful lawsuit, no-fault benefits are subtracted from the damage award, and in the case of no lawsuit (because the other driver is already fully compensated for her loss, or because the expected value of a lawsuit is small given the possibility of losing and being burdened not only with one's own legal costs but also the defendant's party -and-party costs) the negligent driver's third party insurance pays nothing. Because the cost to the insurer is less than that in a tort law regime, third party premiums for drivers with a record of negligence will not be as high. Consequently, the risk of increased premiums will not be as great a deterrent of risky driving,nor will high premiums have as great an activity level effect on those with a high price elasticity of demand for driving.[11]

On the other hand, given the relative ease of ascribing fault in automobile accidents[12], first party premiums will likely go up for drivers who have been at fault in previous accidents. This will have the opposite effect on both care levels and activity levels. However, the first party premiums for these drivers will only increase to cover the increased first party insurance payments[13] that they themselves will receive. For this reason, the increase in first party insurance premiums for the at-fault-driver will be muted and, therefore, its effect on deterrence is likely to be dominated by the effect of the reduction of third party premiums for negligent drivers.

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[11] Michael Trebilcock,"Incentive Issues in 'No Fault' Compensation"(1989) 39 University of Toronto Law Journal at 7.

[12] According to Franklin J. Marryott (cited in Christopher J. Bruce,"The Deterrent Effects of Automobile Insurance and Tort Law: A Survey of the Empirical Literature" (1984),6 Law & Policy 67) in a study of 352 insurance claims, more than 90% involved uncontroversial evidence of fault. As well, a report (A.F. Conrad, Accidental Costs and Payments (1964), cited in Bruce at 70) indicates that less than 0.6% of automobile accident cases were sufficiently complex to require judicial resolution.

There are still other effects at work. To the extent that no-fault benefits allow the poor or seriously injured victim the financial flexibility to forego an expeditious settlement and instead go to court[14], claims against third party insurers of negligent drivers will increase. This will increase care and activity-level deterrence. The final possible effect on deterrence is that resulting from a reduction in the costs of self-inflicted auto accident injuries resulting from negligence. In a pure tort regime such injuries are very costly since they go uncompensated, but under the Osborne model this is not the case.

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[13] Because no-fault benefits are larger under an enhanced add-on no-fault regime.

[14] Jeffrey O'Connell and Robert Joost, "Giving Motorists a Choice between Fault and No-Fault Insurance" (1986) 72 Virginia Law Review at 71. Osborne argues that if anything no-fault benefits in the Ontario add-on no-fault regime acted as a spur to litigation. Osborne,451. Several studies report little reduction in tort litigation in add-on states. See Daniel D. Caldwell,"No-Fault Insurance: An Evaluative Survey" (1977), 30 Rutgers Saw Review at 941-42 (Duff Part A,34). However, a recent study of Maryland's experience estimates that about 7% of eligible liability claimants did not file tort claims because of the availability of no-fault compensation. (See James K. Hammitt Automobile Accident Compensation, Volume II: Payments By Auto Insurers, (Santa Monica: The Institute for Civil Justice, The Rand Corporation,1985) at 57.) This might be merely a result of the extremely low level of no-fault benefits available (unlike the Osborne model) under the Maryland regime (maximum $2,500). This would not likely give the auto accident victim enough financial flexibility to forgo expeditious settlement, as would larger no-fault benefits, and so the only factor operating to affect the level of litigation would be the increase in fully compensated auto accident victims and those who have been compensated to an extent that they do not regard litigation, given its transaction costs, as utility enhancing.

With so many effects operating simultaneously it is by no means evident in theory what the deterrence effect of implementation of the Osborne model would be. Empirically, the answer is also uncertain. There is only one study that tests the effects of add-on no-fault in isolation from other variants of no-fault. That study of New Zealand and all the Australian states and territories from 1970-1981 found add-on no-fault legislation to have no appreciable effect on traffic fatalities relative to the tort system.[15]

(b) Compensation - The Victim Coverage Perspective

(i) Percentage of Victims Compensated:

It seems obvious that when one considers the percentage of traffic accident victims compensated to any extent, an add-on no-fault regime will be superior on that criterion to a pure tort law regime. In the latter regime, those who cannot succeed in a lawsuit, whether because of evidentiary difficulties or the absence of a negligent defendant, will not be compensated (aside from private or job related insurance, and general social programs like medicare or welfare). However, in an add-on regime all victims significantly injured in automobile accidents will qualify for no-fault benefits. The empirical evidence supports this contention:

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[15] R. Ian McEwin,"No-Fault and Road Accidents:Some Australasian Evidence "(1989), 9 International Review of Law & Economics 13.

Table 5.2

Medical Expenses Recovery (U.S. Data)[16]

(% of auto accident victims recovering any compensation by source)

	Tort	Add-On
Group Health	32%	34%
Other Auto Insurance	25%	26%
Own Auto Insurance	22% (uninsured coverage)	34%
Host Auto Insurance	8%	9%
No Payment from Any Source	22%	13%

Table 5.3

Wage Recovery (U.S. Data)[17]

(% of auto accident victims recovering any compensation by source)

	Tort	Add-On
Employers	32%	35%
Other Auto Insurance	26%	22%
Own Auto Insurance	6%	19%
Worker's Compensation	7%	3%
No Payment from Any Source	37%	32%

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[16] J. Rolph, Automobile Accident Compensation, Volume I: Who pays How Much How Soon? (United States: Rand Corporation, 1985) 17.

[17] Ibid.

Table 5.4

% of Victims Compensated from All Sources (U.S. Data)[18]

	Tort	Add-On
For Wage Loss	59%	70%
For Medical Loss	78%	87%
For Total Loss	80%	91%

Table 5.5

# of Auto Accident Victims Compensated Through Auto Insurance Per 100 Cars Insured in 1983 (U.S. Data)[19]

Tort	Add-On
0.92	1.37

(ii) Adequacy of Victim Coverage

There are no clear theoretical reasons for expecting that the extent of coverage for negligently injured individuals will differ as a rule under an add-on no-fault regime as opposed to a pure tort law regime. Those who would receive damages in tort are still able to sue and, therefore, may maintain the extent of their compensation. Those who would have had no viable case in tort will still receive no-fault benefits and, consequently, will be receiving compensation when they would not under a pure tort regime. However, as can be seen from Table 5.6 some empirical evidence appears to show a larger number of under-compensated auto accident victims under an add-on regime than under a pure tort regime in the cases that matter most, those with large total losses[20]:

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[18] R.Houchens, Automobile Accident Compensation, Volume III: Payments from All Sources (United States: Rand Corporation, 1985) 16.

[19] U.S. Department of Transportation, Compensating Auto Accident Victims (1985) 73. This statistic has rightly been criticized on grounds that it ignores cross-state differences in both the number of vehicles driven and in injury rates. George Priest (1988) "Allowing Drivers a Choice Between No-Fault and Fault -Based Auto' Insurance: An Analytical Critique", Yale Law School. Nevertheless, it is likely that at least some difference remains even when these factors are taken into account. This study also reports that only 62.6% of those receiving add-on no-fault benefits would have received damages in tort.

Table 5.6[21]

Total Loss ($'s)		% of Auto Accident Victims		
		underpaid	exact	overpaid
		from all sources		
1-55	tort	7	67	27
	add-on	5	64	31
56-141	tort	27	39	35
	add-on	28	41	31
142-468	tort	25	38	38
	add-on	33	26	41
469-80,000	tort	45	18	37
	add-on	53	17	29

On the other hand, this evidence is not consistent with the several studies which report little reduction in tort litigation in add-on states.[22]

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[20] As well, the table shows a larger number of overcompensated auto accident victims in cases with low total losses. However,the study upon which Table 5.6 is based assumes that compensation for non-pecuniary loss entails overcompensation.

[21] Houchens,20 (U.S. Study). The size of the last range of total losses is obviously far from ideal.

[22] See Caldwell cited in note 14.

(c) Compensation - The Cost Internalization Perspective

Osborne argues convincingly that fairness in the allocation of the cost of automobile accident compensation requires the setting of premiums in accordance with sound insurance principles, that is, in such a way that accident costs are internalized to the drivers most likely to cause them. This process of risk-rating is done by differentiating premiums by reference to the driver's fault in previous accidents and his previous traffic violations, and by reference to the accident rate of the statistical group into which the driver falls. Given that automobile insurance is compulsory it may seem harsh to deny that there is an obligation to provide affordable premiums for all. However, as Osborne points out, while insurance is compulsory, driving is not.[23] This may be too simplistic, for in some parts of the country driving may be close to a prerequisite for employment, but on the other hand the negative deterrent effects resulting from the cross-subsidization by low-risk of high-risk drivers are potentially serious.

As noted above, it seems relatively easy to ascribe fault in most automobile accidents. This should mean that under the Osborne model, premiums can be effectively risk-rated. Of course, somewhat less attention will be paid to fault determination in accidents that do not result in a lawsuit than in those that do. Therefore, to the extent that the number of lawsuits is lower under the Osborne model than under a pure tort law regime, the precision of risk-rating will suffer[24].

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[23] Osborne, 513.

The cases of motorcycles and trucks pose special problems for the setting of appropriate premium rates. Motorcycles cause relatively little damage to third parties, but motorcycle drivers and passengers are vulnerable to serious injuries. It follows that motorcycles pose an increased first party risk and a decreased third party risk as compared to cars. In a competitive insurance market first party premiums for motorcycles will be higher than those for automobiles, but premiums for the compulsory third party insurance will be lower. In an enhanced add-on no-fault regime, since the level of auto accident litigation is still significant, total third party liability costs are still large relative to no fault benefit costs (3.4 times larger[25]); therefore, third party premiums are still large relative to first party premiums. This means that the combination of a reduction in third party premiums and an increase in first party premiums for motorcyclists is still generous to motorcyclists, considering the total amount of accident costs that they cause.[26] Osborne's plan to reduce the first party premiums for motorcyclists by allowing subrogation[27] is, therefore, an ambiguous measure in terms of the cost internalization criterion. Subrogation does place the cost of the accident upon the insurer of the negligent automobile driver and thus is a positive measure in cost internalization terms. However, the insurer of the motorcyclist is released from paying the large differential between the actual accident costs and the costs that would have existed had the motorcyclist been driving an automobile. This is a negative aspect in terms of the cost internalization criterion. We would be inclined to think that this negative aspect dominates.

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[24] Trebilcock, 33.

[25] Calculated from the figures below on premium costs. Total third party liability is $ 203 per car under the Osborne model. Total no-fault benefits per car is $ 59.

[26] Some might argue that motorcycles do not cause accident costs; rather the cars that collide with motorcycles cause accidents. Given that automobiles are the dominant vehicle on the road and that this fact is not about to change, we regard it as more appropriate from a deterrence perspective to view the presence of motorcycles on the road as the cause of the increased cost of the average motorcyclist injury as compared

In the Osborne model, the first party insurance premiums for trucks are justifiably less than those of automobiles. This is because the occupants of trucks are less likely to incur injury and because the Workers' Compensation system will absorb much of the economic loss sustained by truck drivers.[28] As for third party premiums, those for truck drivers will be higher than those for automobile drivers, since trucks do more damage in collisions than automobiles.

As to whether the Osborne model does better than a pure tort

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with that of the average car driver injury and the decreased cost of the average injury of a driver hit by a motorcyclist as compared with that of a driver hit by another automobile.

[27] Osborne,590. Subrogation means here that in the case in which the other party was negligent, the motorcyclist's first party insurer is entitled to reimbursement from the other party's third party insurer.

[28] Ibid.

law regime at internalizing the costs of traffic accidents to driving activities generally, this is unlikely given that there is some kind of statistically equivalent subrogation arrangement (either individuated in Alberta or in 'bulk' form as in the Osborne model) with the insurance industry in both regimes. However, the fact that the collateral source rule is abolished in the Osborne model reduces the amount of compensation that is funded through driving activities generally, by reducing the amount of compensation that insurers must pay.

(d) Operational Efficiencies

As noted above it is not clear that an enhanced add-on no-fault system will reduce the number of lawsuits relative to a pure tort system.[29] However, to the extent it does so, administrative costs will be reduced; claimants' legal expenses, which are estimated to consume 10 to 15% of liability premiums in

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[29] The U.S. experience suggests that the percentage of claims which are fault-related and the percentage of dollars which are spent on them are lower in add-on regimes than tort regimes, and that the percentage of claims which are no-fault and the percentage of dollars which are spent on them are higher in add-on regimes than tort regimes. The following table is taken from the All-Industry Research Advisory Council, Compensation for Automobile Injuries in the United States (1989),133.

Type of State Law	% of Fault-related Claims [incl. uninsur-motorist]	% of Fault-related Dollars	% of No-Fault Claims [incl. payment from extra medical ins.]	% of No-fault Dollars
Tort	70.3	89.9	29.7	10.1
Add-on	56.4	80.6	43.6	19.4

Canada [30], will be reduced, as will public expenditures on legal adjudication. The latter reduction could represent a significant saving; in California the public cost of the average jury trial in 1982 was $7,768 U.S.[31] Whatever the effect on the number of lawsuits, it appears that add-on no-fault regimes are more efficient, since in the U.S., the average add-on no-fault state returned about 53.6% of each premium dollar to injured victims (i.e. them alone, not including money payable to their lawyers)[32], while the comparable payout/payin ratio in the average pure tort state was only 43.2%.[33]

Operational efficiencies will certainly be realized in the Osborne model in the more rapid initiation of the flow[34] of compensation payments.[35] The empirical evidence for U.S. i.e. that payments in tort awards or settlements were much slower than those for first party insurance claims:[36]

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[30] Ontario Law Reform Commission, Report on Motor Vehicle Accident Compensation, (Toronto: Ministry of the Attorney General, 1973), at 15,42. Osborne vol.I (1988) at 258 (figure 7.7).

[31] Rand Corporation's Institute for Civil Justice, Kakalik Ross, Costs of the Civil Justice System (1983) at XV

[32] The methodology used to factor out the money going to lawyers involved using figures from the U.S. Dept. of Transport study of auto insurance in 1970. That study found legal costs to amount to 25% of total recovery under tort for serious injury or fatality cases. In the 1985 study it was assumed that this level of legal costs applies to all auto accident cases. The amount of liability payout in each state was multiplied by 0.75. U.S. Dept. of Transport,82.

[33] Ibid, 83 and making calculations based on data from p.84. In one respect, this comparison exaggerates the differences between tort and no-fault jurisdictions, since it does not include first-party-medical insurance sold in tort states.

[34] It is the initiation of payments, not the timing of the final payment, which matters most to the insured.

Table 5.7

Percentage of Victims Who Have Received Their First Payment Per Month(U.S.data)

	< 1 month	< 2 mo.	< 3 mo.	< 6 mo.	> 6 mo.
liability claims[37]	26.8%	----	46.2%	61.9%	38.1%
first party claims	37.1%	----	80.6%	93.5%	6.5%

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[35] This is especially important in cases in which the economic loss is large,since that is when the delay is greatest under a pure tort regime,as well as being when the need for rapid payment is most critical.

[36] U.S. Dept. of Transport, 79. (Duff,part C, 40) Since tort delay is based on the duration between the accident and settlement, and no-fault delay measures the time between claim filing and first payment, this comparison exaggerates the difference between the two systems. Nevertheless, since only about 10% of tort claims obtain advance payments before final settlement, and there is little reason to delay filing first-party claims, any exaggeration is probably slight.

[37] For liability claims the first payment is also the final payment.

Table 5.8

Timing of Payment - Report of Injury to Final Payment[38]

		Days				
		0-3	**31-90**	**91-180**	**81-365**	**>365**
Liability Claims	Cumulative % of claimants	18.5	33.8	50.5	73.2	100
	Cumulative % of dollars	2.3	7.8	19.8	45.9	100
First-Party Claims	Cumulative % of Claimants	12.7	42.4	67.2	86.1	100
	Cumulative % of dollars	2.7	13.0	31.0	54.9	100

To the extent that the Osborne model expands the role played by first party insurance, faster compensation will occur than under predominantly third party insurance schemes.

As to delays to final payments, figures are only available on no-fault regimes in general (add-on and threshold together).

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[38] All-Industry Research Advisory Council, Compensation for Automobile Injuries in the United States (1989), 51.

Table 5.9

Percentage of Final Compensation Received Over Time (U.S. Data)[39]

	Tort	No-fault
Within 30 days	8.3%	33%
Within 1 year	51.7%	95.5%

Priest argues that these figures are misleading, and that in terms of the number of separate claims paid the differences in timing are much smaller.[40] He cites the following table from the U.S. Department of Transportation's 1985 study to corroborate his point:

Table 5.10

Payment Timing: Report of Injury to Final Payment, Cumulative % of Claimants (U.S. Data)

Days	**Fault**	**No-Fault**
0-30	23.2%	19%
0-90	41.8%	56.9%
0-180	58.2%	79.1%
0-365	76%	92.5%
>365	100%	100%

Osborne argues that prompt payment of compensation is crucial because it promotes early rehabilitation.[41] Note that rehabilitation is not affected by a long delay in final payment if the payment flow is started promptly.

(e) Premium Costs

The premium structure of the Osborne model is as follows:

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[39] U.S. Department of Transport (1985) at 79.

[40] Priest (1988) at 18.

[41] Osborne,456.

Table 5.11

Cost Breakdown (in $) Per Car (for Ontario)[42]

	Current	Proposed	Change
No Fault Benefits			
Rehab.,Long-term Care, Medical	7.72	18.56	10.84
Funeral	0.22	0.88	0.66
Death	1.20	3.47	2.27
Disability - wage earner	13.57	30.94	17.37
- student	nil	2.58	2.58
- homecare	n.a.	0.16	0.16
- child care	nil	2.29	2.29
Total No Fault Benefits	22.71	58.88	36.17
Third Party Liability			
Bodily injury claims[43]	198.64	173.67	-24.97
Adjustment expense	29.68	29.68	nil
Total third party liability	228.32	203.35	-24.97
Other			
Property damage	78.76	78.76	nil
Plan for accidents in Quebec	0.92	0.46	-0.46
Uninsured motorist	8.55	6.81	-1.74
Total other	88.23	86.03	-2.20
Compensation Issues			
Abolishing collateral source rule	n.a.	-6.62	-6.62
Reduction of Prejudgment interest[44]	n.a.	-9.14	-9.14
Reduction of party-and-party costs[45]	n.a.	-5.76	-5.76
Total compensation Issues	n.a.	-21.52	-21.52
TOTAL LOSS COSTS	339.26	326.74	-12.52

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[42] Osborne,586.

[43] A consequence of a reduced number of lawsuits. The increased financial flexibility effect is assumed not to be a factor. Joe S. Cheng claims surveys in Osborne, vol.II, 640-1.

[44] It was over compensatory at the time.

[45] Manitoba, Saskatchewan, and British Columbia all have party-and-party costs set at a lower rate. Osborne, 570.

There may be a number of problems with the above estimates. One is that the cost savings resulting from the abolition of the collateral source rule may be overestimated. Osborne has failed to take account of the rational response to such a policy: people may simply eliminate auto accident insurance from the collateral source coverage. It is also misleading to count the cost savings that fall under the heading of "Compensation Issues" as part of an enhanced add-on no-fault regime . These result from general tort reforms,which could be incorporated into a pure tort law regime. If this point is accepted, the introduction of enhanced add-on no-fault benefits appears to lead to an increase in costs of coverage per car. Given the U.S. experience, this is what one would expect. According to one report, between 1971 and 1977, premium increases in add-on states were more than twice as large as those in pure tort states.[46] From 1976 to 1983, this difference was less pronounced, with add-on states experiencing an average premium increase of 40.75, compared to 35.3% in pure tort states.[47] Of the four states that have introduced add-on no-fault compensation systems since 1984, all but one is estimated to have experienced increased overall automobile injury coverage costs as a result of the change from tort regimes:

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[46] Daniel D. Caldwell, "No-Fault Automobile Insurance: An Evaluative Survey" (1977) 30 Rutgers Law Review,965.

[47] Department of Transport, (1985) at 70.

Table 5.12

Increase in Overall Auto Injury Insurance Costs[48]

	1982-3	1987-8
Delaware	17%	59%
Maryland	26%	26%
Pennsylvania	--	37%
Oregon	-8%	-3%

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[48] Jeffrey O'Connell,"No-Fault Auto Insurance: Back By Popular (Market) Demand?" (1989), 26 San Diego Law Review,998. We have no explanation for the anomalous behaviour of costs in Oregon.

CHAPTER 6

THRESHOLD NO-FAULT

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I DESCRIPTION OF THE MODEL

The recently adopted Ontario no-fault system will serve as our exemplary model for a threshold no-fault regime. In this model,there are extensive no-fault benefits, similar to the enhanced add-on model, but access to the tort system is now precluded except in the case of "death, permanent serious disfigurement, or permanent serious impairment of an important bodily function caused by continuing injury which is physical in nature."

As in the Osborne model, the collateral source rule is abolished. Tort damages or no-fault benefits are secondary to payments for loss of income received or available under the laws of any jurisdiction (presumably including U.I.C. benefits and Canadian Pension Plan long-term disability benefits) or under income continuation benefit plans (private or employment related), and to payments received under sick leave plans arising by reason of occupation or employment. Old age security benefits, however, are not deductible. Again, no-fault benefits are deducted from any tort damage award.

The no-fault benefits are primary to any medical, surgical,dental, or hospitalization benefits payable under any Act administered by the Ministry of Community and Social Services.[1] As well, OHIP no longer is subrogated to the rights of automobile accident victims.[2]

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[1] Insurance Board of Canada, Bulletin No. Ontario 216, Nov. 22, 1989.

As in the Osborne model, the minimum coverage for third party liability is set at $200,000.

Table 6.1

No-Fault Benefits:

Add-on Model (for comparison)	Threshold Model[3]
Rehabilitation & Medical Not Covered by OHIP $500,000 per claim maximum. Time limit: 10 years or 20 years less victim's age[4], whichever is longer.	Same
Long-term Care $500,000 per claim maximum.	Same
Benefits not to exceed the monthly cost of group residence which might reasonably accommodate victim's needs.	Benefits not to exceed $1,500/ month.[5]
Disability Income Benefits 1) Employed 80% of gross income, to maximum of $450 per week. Secondary to collateral benefits, except U.I.C.[6] benefits Age 16 or over 7-day waiting period	80% of gross wages, to a maximum of $600 per week for 3 years or life if totally disabled. Additional coverage over the $600 max. may be purchased to bring the overage up to 90% of gross wages. This extra coverage is not secondary to the basic no-fault coverage[7]
2) Deemed to be Employed Claimant must have worked 6 out of last 12 months. 80% of gross income, to maximum of $450 per week Age: between 18 and 65 60-day waiting period	To qualify, claimant must have worked 6 out of last 12 months. As immediately above

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[2] Insurance Board of Canada, Bulletin No. Ontario 41, June 22, 1990.

3) Students Elementary school:$1,000 for loss of school year; $340 per week at age 19 if still disabled and not attending school. Secondary school: $2,000 for loss of school year; $340 per week at age 19 if still disabled and not attending school. College/University: $4,000 for loss of school year; $340 per week when no longer entitled to loss of school year benefits.	{$185 per week for 3 years, or life {if totally disabled
Disability Benefit For the Unemployed N.A.	{$185 per week for 3 years, or life {if totally disabled.
Homemaker Disability Benefit N.A.	{As immediately above.
Child Care In case of injury to provider of child care, $200 per week plus $50 per week per dependent child to maximum $350 per week. No waiting period. Payable for 2 weeks without proof of expenses inc; then payable with proof of reasonable expenses incurred.	In case of injury to provider of child care, $50 per child per week. Maximum $200 per week
Household Care: house-keeping, meal preparation, grass cutting etc. $50 per week payable on basis of reasonable expenses incurred.	
Death Benefit For death of head of household or spouse of head of household: $25,000 plus $10,000 more for each dependent For death of a dependant child: $10,000	For death of head of household or spouse $25,000 For death of dependant child: $10,000
Funeral Expenses $3,000	$3,000.

Collision Coverage (for damage to automobile) same as former Ont. regime	Coverage is in proportion to the degree the driver is not at fault. i.e. if the driver if 25% at fault, then 75% of the damage is covered.
All benefits, except the death indexed once a year to annual consumer price index, subject to a maximum of twice the stipulated benefit.	Benefits will be reviewed at least every 2 years.

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*3. The no-fault benefits are available to all accident victims who sustain physical, psychological or mental injury. The FAIR committee expressed concern that a parent who witnessed the injury of his or her child and suffered psychological injuries as a consequence would not be eligible for no-fault benefits. Imants Abols, legal counsel in the Ministry of Financial Institutions states that such a witness would be considered an accident victim. The No-Fault Benefits Schedule states that "insured person" includes a person who is not the occupant of an automobile who suffers physical, psychological or mental injury as a result of an accident. It is not clear that Abols interpretation is uncontroversial. The CBAO has pointed out that self-employed individuals who fall under the threshold will be ineligible to recover for loss of profit and losses associated with disruption of business.

4. The latter time period allows children under the age of 10 the extra time which they sometimes need to be rehabilitated.

5. I.B.C., Bulletin 216.

6. Unemployment Insurance Canada

7. If an individual earns $52,000 per year or $1,000 gross weekly income she can purchase extra no-fault coverage so that she will recover an additional $200 per month above the basic $600 per month, or $800 per month (80% of her gross weekly income).

II EVALUATION OF THE MODEL

This section will evaluate the threshold model taking the add-on model as our benchmark.

(a) Deterrence/Prevention

The threshold in the new Ontario system is set relatively high, being somewhat more restrictive than that of Michigan[8], which has the effect of limiting lawsuit eligibility to about 12%[9] of those collecting no-fault benefits.[10] As a consequence, one would expect that deterrence for risky driving behaviour is reduced relative to that of the Osborne model. As will be recalled, under the Osborne model the effect of the reduction of third party insurance premiums for negligent drivers is likely to dominate the effect of the increase in first party insurance premiums for those drivers. Under the threshold regime, this effect is magnified because since there will be fewer lawsuits than under an add-on regime and, therefore, more instances in which the third party insurer of the negligent driver will not be forced to cover the full costs of the other driver's[11] losses, the reduction of third party premiums for previously negligent drivers will be greater.

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[8] Whereas the Ontario threshold is worded "death, permanent serious disfigurement, or permanent serious impairment of an important bodily function caused by continuing injury which is physical in nature", the Michigan threshold is not qualified by the word "permanent", nor the phrase " caused by continuing injury which is physical in nature".

[9] Rolph (1985) at 19. In other words, about 88% of claimants cannot sue in tort. Minister of Financial Institutions, Murray Elston predicts that 90% of claims will be excluded from the tort system under the present Ontario scheme.(Statement to Ontario Legislature,Oct. 23,1989)

[10] In Michigan about 36% of claimants are barred from tort actions who would have been eligible under a traditional tort regime. All-Industry Research Advisory Council, Compensation for Automobile Injuries in the United States (1989), 133d 150..

Although motor vehicle accidents are relatively amenable to fault determinations, as the number of drivers whose conduct is subject to review under the tort system is reduced it is likely that the information upon which individuated risk ratings could be based will be attenuated. This may lead to the further weakening of deterrence under a threshold no-fault model.[12]

The implementation of systems that diverge progressively further from a fault-based tort system may in the long run have a further negative effect on deterrence in that they may socialize drivers so as to regard risk-taking as divorced from blameworthiness.[13] If such a process were, indeed, long-term it would not be surprising if it were undetectable at this time. The empirical evidence is less clear about the effects of the introduction of a threshold no-fault regime. Two U.S.studies originally indicated likely negative effects on deterrence. A regression analysis by Medoff and Magaddino[14] found increased loss rates compared to tort jurisdictions of 7.449% in the states with the most significant thresholds, of 6.308% in threshold jurisdictions as a whole, and of 3.955% in add-on and threshold jurisdictions as a group. A study by Landes[15] reported similar,but more alarming results. She estimated that states with "relatively modest restrictions on tort suits" experienced between 2 and 5 percent more fatal accidents as a result of adopting no-fault, while states with more restrictive laws experienced as many as 10 to 15 percent more fatal accidents.

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[11] Or passenger or pedestrian. In the new Ontario system passengers and pedestrians claim on their own auto insurance,if they have it.

[12] Michael Trebilcock, "Incentive Issues in 'No-Fault' Compensation" (1989 39 Univ. of Toronto L.J. at 33.

[13] White cited in: The Honourable Mr. Justice Coulter A. Osborne, Report of Inquiry into Motor Vehicle Accident Compensation in Ontario, vol. 1 (Toronto: Ontario Ministry of the Attorney General and the Ministry of Financial Institutions, 1988) at 535.

However, these studies have come under severe criticism. In the Medoff and Magaddino study there is a methodological problem in that there is a large number of independent variables relative to the small sample size. As well the choice of the liability loss rate as the dependent variable is problematic since its increase could reflect just as well a rise in average claim costs, a fall in average premiums, or a drop in the number of insured vehicles, as an increase in the number of accidents. While the authors reject the possibility of a rise in average claim costs, the evidence upon which they base these conclusion is limited.[16] They do not address the possibility of any decrease in average premiums per vehicle.[17] The Landes study is also open to several criticisms. On a basic conceptual level, critics have questioned her use of fatal accidents as a dependent variable. O'Connell and Levmore argue that because all tort thresholds examined by Landes are exceeded in the case of any accident causing death, the choice of fatal accidents as a dependent variable is a curious test of tort law's deterrence effect.[18] Since tort incentives to avoid motor vehicle fatalities are unaffected by U.S. legislation, they argue it is hard to explain why no-fault jurisdictions should experience any increase in such accidents.[19] So too, emphasizing the limited extent of legal constraints in most U.S. threshold states, Zador and Lund are sceptical about the likelihood of significant changes in driving behaviour attributable to no-fault legislation. Since most threshold states abolished tort law only for relatively minor injuries, leaving major injuries and property damage to the tort system, and since injury claims without associated property damage are extremely rare, the extent to which at-fault drivers were penalized by higher insurance premiums was largely unaffected by no-fault laws.[20] Thus, a substantial reduction of liability-induced precautions (to whatever extent that they exist) seems implausible.

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[14] Marshall H. Medoff and Joseph P. Magaddino,"An Empirical Analysis of No-Fault Insurance" (1982), 6 Evaluation Review 373.

[15] Elizabeth M. Landes, "Insurance,Liability and Accidents: A Theoretical and Empirical Investigation of the Effect of No-Fault Accidents" (1982), 25 Journal of Law and Economics, 49.

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[16] Medoff and Magaddino (1982) at 383 (reporting that average claim costs fell in Massachusetts and Florida during the year after the introduction of no-fault in those states)

[17] Which is, after all, one of the avowed objectives of the introduction of a threshold regime.

[18] Jeffrey O'Connell and Saul Levmore, " A Reply to Landes: A Faulty Study If No-Fault's Effect on Fault?" (1983), 48 Missouri Law Review, 650-1; Paul S. Kochanowski and Madelyn V. Young, " Deterrent Aspects of No-Fault Automobile Insurance: Some Empirical Findings"(1985),52 Journal of Risk &Insurance, 285; Paul Zador and Adrian Lund, "Re-Analysis of the Effects of No-Fault Auto Insurance on Fatal Crashes"(1986), 53 Journal of Risk & Insurance, 228.

[19] On the other hand, an increase in fatal accidents might be expected if drivers perceive only the existence of no-fault but not its limits, or alternatively if threshold no-fault reduces care levels at the margin but drivers are unable to distinguish between driving patterns that increase the risk of fatal and non-fatal accidents. Nevertheless, as O'Connell and Levmore point "there are grave difficulties in assuming that drivers are superrational and, at the same time, psychologically induced to be irrational. The hypothetical driver who carefully accounts for (or acts as if he so calculates) probabilities and thresholds and, with technical

More recent empirical work has not supported the findings of the above studies. In a recent attempt by Zador and Lund to replicate Landes' study with data covering the period 1967-1980, the coefficients of all legal variables were insignificantly different from zero.[21] Kochanowski and Young, using a model

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precision,discounts his own injuries, is hardly the same human who is fooled into causing fatalities by small changes in the medical expense threshold." O'Connell and Levmore(1983) at 651. While this argument works against the assumption that fatal accidents increase because drivers only perceive the existence of no-fault, not its limits, it does not necessarily work against the assumption that drivers are unable to distinguish between driving patterns that increase the risk of fatal and non-fatal accidents, since the skill required to determine that premium increases for negligent drivers have been reduced is of an entirely different kind than the skill required to distinguish between the driving patterns that increase the risk of fatal and non-fatal accidents.

[20] Zador and Lund, 235.

[21] Zador and Lund, 233.

which explained 60% of state variation in fatal accidents from 1975-1977, found no significant relationship between no-fault and the rate of fatal accidents.[22]

It is, therefore, difficult to support empirically our earlier hypothesis about the relative deterrence of effects add-on no-fault and threshold no-fault systems. However, one must remember that most U.S. threshold systems (unlike Michigan) have very low thresholds. In the U.S., therefore, it is not very surprising that a differential in terms of deterrence cannot be clearly demonstrated. Such a difference would be more surprising in a study of the comparative deterrence effects of add-on regimes and high threshold regimes, like the new Ontario system.

(b) Compensation - The Victim Coverage Perspective

(i) Percentage of Victims Compensated:

It would seem that in considering the percentage of auto accident victims that are compensated to any extent, the difference between enhanced add-on no-fault and threshold no-fault would be largely insignificant. In an add-on regime all those who sue are also eligible for no-fault benefits. This means that although a threshold regime will bar a number of accident victims from compensation through the tort system it would not deprive any of these claimants from no-fault compensation.

The U.S. empirical data does, however, indicate that there are some differences between the systems:

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[22] Kochanowski and Young,269.

Table 6.2

Medical Expenses Recovery (U.S. Data)[23]

(% of auto accident victims recovering any compensation from the source)

	Threshold	**Add-On**
Group Health	33%	34%
Other Auto Insurance	9%	26%
Own Auto Insurance	39%	34%
Host Auto Insurance	10%	9%
No Payment from Any Source	18%	13%

Table 6.3

Wage Recovery (U.S. Data)[24]

(% of auto accident victims recovering any compensation from the source)

	Threshold	**Add-On**
Employers	46%	35%
Other Auto Insurance	6%	22%
Own Auto Insurance	36%	19%
Worker's Compensation	5%	3%
No Payment from Any Source	24%	32%

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[23] J. Rolph, Automobile Accident Compensation, Volume I: Who pays How Much How Soon? (United States: Rand Corporation, 1985) 17.

[24] Ibid.

Table 6.4

% of Victims Compensated to Any Extent from All Sources (U.S. Data)[25]

	Threshold	**Add-On**
For Wage Loss	77%	70%
For Medical Loss	83%	87%
For Total Loss	87%	91%

Table 6.5

# of Auto Accident Victims Compensated Through Insurance Per 100 Cars Insured (U.S. Data)[26]

Threshold	Add-On
1.84	1.37

It is important to keep in mind the fact that these data exaggerate any differences in the percentage of auto accident victims compensated at all between the Osborne model and the new Ontario system. This is because the no-fault figures are from American states with very minimal levels of no-fault benefits. The two regimes that we are considering are quite comparable as to the level of no-fault benefits. It is interesting to note, though, that even given the limitations of the data, neither regime is superior on all counts: add-on no-fault is superior in medical recovery and threshold no-fault is superior in wage recovery although the latter superiority seems to depend upon a greater incidence of employment-related compensation in threshold states, and so is somewhat artificial.

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[25] R. Houchens, Automobile Accident Compensation, Volume III: Payments from All Sources (United States: Rand Corporation, 1985) 16.

[26] U.S. Department of Transportation, Compensation Auto Accident Victims (1985) 73.

(ii) Adequacy of Victim Coverage

The no-fault benefits provided under the Osborne model and the present Ontario regime are quite similar,the main differences being a somewhat higher income benefit under the Ontario plan along with a lower student disability benefit. Where the two systems differ significantly in terms of extent of victim coverage is in the compensation for non-pecuniary and psychological injury losses. Under the Ontario scheme the large proportion of otherwise potential plaintiffs whose injuries fall below the threshold are barred from recovery in tort. This means that those with moderate non-pecuniary losses do not recover them and those with relatively high incomes do not receive full compensation for income loss. As well, psychological injuries never pass the threshold and, therefore, those who suffer from them do not recover non-pecuniary losses no matter how great their suffering has been and/or will continue to be.

The following chart, which assumes (controversially) that any compensation greater than economic loss is over-compensation, indicates that payments under an add-on system are often greater than those under threshold no-fault:

Table 6.6[27]

Total Loss ($'s)		% of Auto Accident Victims underpaid	 exact	 overpaid
		from all sources		
1-55	threshold	11	71	18
	add-on	5	64	31
56-141	threshold	27	49	23
	add-on	28	41	31
142-468	threshold	30	44	26
	add-on	33	26	41
469-80,000	threshold	49	17	26
	add-on	53	17	29

Those accident victims who are barred from the tort system under the new Ontario regime are not only deprived of non-pecuniary losses. Those who had been earning more than $39,000 per year will also not recover full compensation for their economic losses.

(c) Compensation - The Cost Internalization Perspective

As argued above in the section on deterrence, it may be the case that the threshold regime is less conducive to individuated risk rating. If this is the case the burden of automobile accident compensation will not be borne as fully by high-risk drivers as under either add-on no-fault or pure tort regimes.

The problem with allowing subrogation in the case of motorcycle-automobile accidents, discussed above with respect to the Osborne model, once again arises in the new Ontario scheme, which allows subrogation in cases in which payments are over $2,000. Under a threshold regime, third party insurance premiums will still be of significant size relative to first party premiums. This means that the combination of the reduction in third party premiums and the increase in first party premiums that motorcyclists will face relative to automobile drivers is still fair to motorcyclists, considering the total amount of accident costs that they cause. That is to say, that even in a threshold regime, subrogation for motorcycles may, on balance, be a regressive measure in terms of the cost internalization criterion. This potentially regressive measure in the new Ontario system, however, is balanced by the progressive measure of granting insurers of automobiles subrogation rights against the insurers of commercial vehicles exceeding 4,500 kilograms.[28] It is true that even without such subrogation rights the differential between typical accident costs caused by "trucks" and those caused by automobiles is reflected in increased third party premiums relative to automobile drivers and in reduced first party premiums relative to automobile drivers. However, from a cost internalization perspective it is desirable for negligent drivers to bear the costs of the accidents that they cause, which is what occurs when subrogation exists.

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[27] Houchens, 20. U.S. Study. The size of the last range of total losses is obviously far from ideal.

Another inequity in the new Ontario plan is that those innocent victims of automobile accidents whose losses fall below the threshold are paying a unjust share of the cost of automobile accidents in that they are forced to forego their full corrective justice entitlements[29], namely, their non-pecuniary damages (and in the case of previously high income earners, full compensation for income loss). Even if one argues that most accidents are caused by driving errors which are morally non-culpable[30], some accidents result from morally culpable error.

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[28] I.B.C., Bulletin Ontario 217, p.2.

In comparing the new Ontario system to the Osborne model with respect to the internalization of the costs of traffic accidents to driving activities generally, there are a number of factors to consider. One relevant factor is that the two plans espouse abolition of the collateral source rule; therefore, one would expect little difference in the degree of cost internalization to driving activities generally.

However, there is another relevant factor with respect to the degree of the cost internalization of accidents in the new Ontario system. The new Ontario plan has eliminated the right of subrogation for OHIP. This embodies a significant shift of the cost burden away from drivers in that OHIP had been receiving approximately $48 million per year as a bulk subrogation payment under the old Ontario system.[31]

On balance it appears that the new Ontario regime will be significantly worse than the Osborne model in terms of internalizing the cost of automobile accidents within the driving population.

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[29] See Chapter One.

[30] See Chapter Two.

[31] Globe & Mail, August 7, 1990, p. A-4.

(d) Operational Efficiencies

As noted above, the Michigan auto accident compensation plan, which is similar in many respects to the Ontario system, eliminates about 90% of no-fault claimants from the tort system. However, this reduction in law suits does nothing to limit the largest and,therefore, most expensive lawsuits. As well, legal costs will to some extent shift into litigation over the issue as to what cases fall above or below the threshold. This is especially true in verbal threshold systems, such as Ontario's.[32] It is for these reasons that Osborne is sceptical that administrative costs savings will be very large for systems like that of Ontario's.[33] There will be some savings since adjusters will not need to investigate fault in cases that are clearly below the threshold.[34] Still,the legitimacy and extent of injuries will remain matters for investigation.

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[32] As for disputes over entitlement to no-fault benefits, a new dispute resolution system is in place. Under this system, disputes will first be referred by either the insurer of the insured person to compulsory mediation. If mediation fails, an insured person will have the option of proceeding by way of arbitration or litigation to resolve the claim. Ontario bill 68.

[33] Osborne, vol. I, 523-4. Even in a pure no-fault regime Osborne predicts a mere 5% increase in the payin/payout ratio. A threshold regime could not even do this well.

[34] A system which significantly differentiates premiums on grounds other than court adjudicated determinations of fault leads to somewhat increased due process concerns -demands for arbitration and appeal procedures- over rate classification. One would expect a slight increase in

It may be that Osborne overstates his point somewhat. A U.S. Department of Transport study showed a reduction in the number of lawsuits of 31.3% in Michigan. [35] Even if the number of lawsuits eliminated are small, given that the public cost of the average jury trial in California is $8,300 U.S.[36], one would think the saving is still likely to be significant. However, other empirical evidence does,indeed, support Osborne. On average, add-on states return a higher percentage of the premium dollar to traffic victims (alone, apart from their lawyers)[37] as compared to verbal threshold states (53.6% vs. 47.8%).[38]

With respect to the other form of operational efficiency with which we are concerned - the speed at which the flow of payments is begun-one would not in general expect a threshold regime to be any more efficient than the enhanced add-on plan. Nevertheless, the new Ontario system may be more efficient than the Osborne model. This is because it implements a penalty payment of 2% of the total claim value per month for insurers who

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administrative costs in this area.

[35] Dept. of Transport, 83.

[36] Rand Corp.'s Institute for Civil Justice, cited in Dewees, II-62. This figure may be misleading since jury trials are not common in Ontario.

[37] See note 28.

[38] Calculated from figures presented in Dept. of Transport at 84. It is interesting to note that Michigan, itself, returns a comparatively high 55.1% of the premium dollar.

do not initiate payment within 10 days of proof of income loss and 30 days of proof of other economic losses, such as rehabilitation and care benefits.[39]

(e) Premium Costs

Without the implementation of the new Ontario plan, the government claims that premium costs would have had to increase 30-35% in 1990. Automobile insurers in Ontario claimed that prevailing premiums and investment income were insufficient to cover loss costs. Under the present scheme, premiums will only rise in the Oshawa-Toronto-Hamilton corridor where there will be a premium rise of 8%. This apparently means that, as compared to the old unenhanced add-on no-fault plan, there will be an effective drop in premiums of 30-35% outside the corridor and 22-27% inside the corridor. As can be calculated from the total loss costs figure in the premium costs section in chapter 5, the estimated premium cost saving resulting from implementation of the Osborne model was 3.7% relative to the old unenhanced add-on no-fault plan. According to these figures the new threshold system is very much more effective in reducing premium costs.

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[39] O. Reg. 273/90, s. 24. While Osborne recommends that no-fault benefits be paid within 15 days of insurers receipt of required documentation, no penalty is possible, Osborne, Vol. I, 604.

CHAPTER 7

PURE NO-FAULT

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I DESCRIPTION OF THE MODEL

The Québec no-fault scheme will serve as our exemplary model for a pure no-fault regime. In this model, the tort system is totally foreclosed to victims of traffic accidents with respect to personal injuries.[1] No-fault benefits are provided through mandatory first-party insurance to all individuals injured in automobile accidents. The plan is financed jointly from general revenues[2] and from a uniform premium system (for given classes of vehicles) independent of an individual's risk class and safety record. When an income replacement indemnity is payable under the Québec Pension Plan or the Act respecting industrial accidents and occupational diseases, the no-fault benefit is correspondingly reduced.[3] The no-fault benefits are as follows:

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[1] In addition to the public plan the minimum amount of private liability coverage (property damage) required is $50,000.

[2] A part of the existing tax revenues from fuel sales was earmarked to finance the regime, but the tax rates on fuel were not increased. Marc Gaudry, "The Effects on Road Safety of the Compulsory Insurance, Flat Premium and No-Fault Features of the 1978 Québec Automobile Act" in Osborne vol.II,p.26, note 1.

[3] Bill 92, An Act to Amend the Automobile Insurance Act and other Legislation 11 June 1988, s. 83.68.

Table 7.1

Threshold Model (for purposes of comparison)	Quebec Plan[4]
Rehabilitation & Medical Not Covered by OHIP $500,000 per claim max. Time limit 10 years or 20 year less victim's age,[6] whichever is longer	Pays costs of the Regie-approved rehabilitation program. The program is extensive.[5]
Long-Term Care $500,000 per claim max. Benefits not to exceed $1,500/month.[7]	Long-Term Care at Home $200 weekly (about $570,000 for 50 years). If continuous personal supervision is required, $500 weekly $1.3 million for 50 years).
Lump-sum for Permanent After-effects of Injury (Non-pecuniary Loss) N.A.	$75,000 per claim maximum. $100,000 after 1 January 1991 and $125,000 after 1 Jan. 1992.
Disability Income Benefits 1) Employed 80% of gross wages, to a maximum of $600 per week for 3 years of life if totally disabled. Additional coverage beyond the $600 max. may be purchased to bring the coverage up to 80% of gross wages. This extra coverage is not primary to the basic no-fault coverage.	90% of net[8] income. Qualifying gross income cannot exceed $40,000[9]. Income benefits are secondary to Quebec Pension Plan disability pension or similar plans.
2) Deemed to be Employed To qualify, claimant must have worked 6 out of last 12 months. As immediately above.	2) Temporary or Part-time Employment During first 180 days: As immediately above. After 180 days: the benefit is based upon the gross income from the type of employment that the Régie presumes the victim would have had were it not for the injury.

3) Students $185 per week for 3 years, or life if totally disabled.	Elementary school $3000 for loss of each school year. Secondary school: $2,000 for loss of each school year; If disability persists beyond the school year during which the victim turns 16 the benefit is based upon the average Québec earnings per year ($24,099). College/University: $5,500 for loss of each term to a maximum of $11,000 per year. If the disability persists beyond the scheduled end of studies, the income benefit is based upon average Québec earnings per year.
Disability Benefit For the Unemployed $185 per week for 3 years, or life if totally disabled.	a) For the Unemployed Capable of Working During the 1st 180 days after the accident the benefit is based upon the greater of: 1) gross income from employment the victim would have held were it not for the accident; 2) unemployment benefits lost because of the accident. After 180 days, the benefit is based on gross income from the type of employment that the Régie presumes the victim would have had were it not for the injury. b) For the Unemployed Constitutionally Incapable of Working No income benefit.
Homemaker Disability Benefit As immediately above.	N.A.
Substitute Labour Costs For a Family Business N.A.	Reimbursement to a maximum of $500 weekly for first 180 days for costs of hiring substitute labour to replace unpaid family member.
Child Care In case of injury to provider of child care, $50 per child per week. Maximum $200 per week.	Reimbursement of Care Expenses For the full-time employed, temporarily employed, and students: $75 for the care of 1 person; $100 for 2; $125 for 3; $150 for 4 or more.
Household Care: housekeeping, meal preparation, grass cutting etc.	For the part-time employed and the unemployed who were capable of working; $250 for the care of 1 person; $250 for 2; $310 for 3; $340 for 4 or more.

Death Benefit For death of head of household or spouse $25,000	For death of head of household or spouse; It depends on the victim's age and income. Min. of $40,000 to max. of $200,000 to surviving spouse. Depending on the age of other dependent,$19,000 to $35,000 to that dependent.If the dependent is disabled at the time of the victim's death: additional $16,500.Children of a single parent family and other dependents are entitled also to equal shares of the spousal benefit.
For death of dependent child: $10,000.	For death of a victim without spouse or dependent: $15,000 to parents.
Funeral Expenses $3,000.	$3,000

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II EVALUATION OF THE MODEL

(a) Deterrence/Prevention

In the threshold model we were concerned that deterrence is relatively weak since total premiums for negligent drivers fall

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*4 Compensation Table for Accidents Occurring between January 1 and December 31,1990, Régie de l'assurance automobile du Québec. The benefits are not subject to tax.

5 Osborne, at 462-3. By the Québec Automobile Insurance Act, s. 155.1 the Régie must also transfer an annual lump sum amount to medicare. In 1990 the amount is 68 million.

6 The latter time period allows children under the age of 10 the extra time which they sometimes need to be rehabilitated.

7 I.B.C., Bulletin 216.

8 After income tax, unemployment insurance premiums and pension plan contributions.

9 So the weekly maximum will necessarily fall under $690. It will likely be much under $690.

relative to those of the enhanced add-on no-fault model (as the number of lawsuits decrease, third party premiums fall and this decrease is not fully matched by increases in first party premiums), and because relative to the enhanced add-on regime information relevant for purposes of risk-rating is less accessible. These relative disadvantages should be even more evident in a pure no-fault regime, where there is no third party insurance for bodily injury at all, and where there are no trials in which to make fault determinations. As well, the pure no-fault regime diverges from the fault-based tort system even more sharply than the threshold regime. Consequently, one might expect that in the long run, deterrence might be further undermined relative to the threshold regime as drivers are socialized, to an even greater extent, to regard risk-taking as divorced from blameworthiness.

The deterrence problem is apparently much magnified in the Québec plan relative to pure no-fault systems generally because of its flat premium rating system. One would expect the reduced premiums for risky drivers to have a negative effect on care-levels and the reduced premiums for young, male drivers, whose demand for driving is highly price elastic, to have an undesirable effect on the activity levels of risky drivers.[10] Gaudry's empirical study of the Québec system appears to show as much. In his study, looking only at the first twelve months of the new regime, the reforms were associated with a 26.9 percent increase in all automobile accidents, a 26.3 percent increase in accidents involving material damages above a specified amount (despite the fact that this amount increased from $200 to $250), a 31.8 percent increase in accidents with at least one injury (no deaths), and a 7.0 percent increase in automobile fatalities.[11] While the larger figures probably contain a substantial reporting bias[12],the reported impact on the number of fatal accidents is free of any such bias. Gaudry attributes the effects that he derives not to the no-fault scheme itself, but instead partly to more stringent enforcement of compulsory insurance, leading previously uninsured drivers to drive with less care[13], and partly to the adoption of the flat-rate premium structure.[14] While emphasizing the difficulty of distinguishing among different components of the 1978 reform, he concludes that:

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[10] Gaudry, 9.

> previous moral hazard experience with compulsory automobile insurance and the very strong evidence of adverse selection caused by the subsidization of high risk drivers suggest that the contribution of no-fault,as such, to the reduction of driver care and deterrence was very small...[15]

Thus, it is the insurance regime, rather than the liability regime, that is central to Gaudry's analysis.

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[11] Gaudry,5.

[12] By compensating accidents involving personal injuries but not material damages alone, the new regime created incentives for Québecois to classify as accidents with injuries accidents that would previously have been declared as accidents involving only material damages.Ibid. at 9.

[13] Ibid. at 20.

[14] Ibid. at 21-23.

[15] Ibid. at 24.

Despite strikingly similar empirical findings, Devlin attributes increases in automobile fatalities directly to the abolition of civil suits for negligent driving. After estimating an increase of about 4.7 percent in fatal accidents as a result of the flat-rate premium structure,[16] and an increase of 9.62 percent in accidents involving fatalities, bodily injury or property damage as a result of a reduction in average level of driving care,[17] Devlin concludes that "irrespective of how the first-party insurance is priced" no-fault compensation reduces average driving care and increases the incidence of automobile accidents.[18] For two reasons, this conclusion ought be cautiously received. First, by emphasizing a strong inverse relationship between driving care and no-fault compensation, Devlin downplays the deterrence effect of the injury itself; since monetary compensation often cannot perfectly alleviate non-economic losses (and since no-fault typically limits recovery for pain and suffering), Devlin's focus on the marginal impact of eligibility for monetary compensation seems inflated. Second, by minimizing the significance of first-party insurance pricing, Devlin ignores the important role of the insurance regime in shaping driver care and activity levels. In fact, while her model controls for total kilometres driven and for proportion of young male drivers among the driving population,[19] it fails to account for the elimination of experience rating under the Québec scheme.[20]As a result, any attempt to attribute lower average driving care to the abolition of tort liability, as opposed to changes in the structure of insurance premiums, is inherently problematic.

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[16] This figure combines a 0.99 percent "insurance price adjustment effect" on the demand for automobiles, and a 3.72 percent "income effect" on the demand for kilometres driven. Rose Ann Devlin, Liability Versus No-Fault Automobile Insurance Regimes: An Analysis of the Experience in Québec, Ph.D. Thesis, University of Toronto,1988, 170-86,194-201. Rose Ann Devlin, " Liability versus No-Fault Automobile Insurance Regimes: An Analysis of the Experience in Québec" (26 October 1988b),University of Toronto Law and Economics Workshop, 19-26. By causing the premiums of high-risk drivers to rise by about 1 percent, flat-rates would be expected to increase the relative proportion of high-risk drivers among the total driving population, and thus to increase the number of fatal accidents.Ibid. at 15,22.

[17] Ibid. at 202-12, 215-20. While regression analysis actually generates elasticities of 26.74 percent for bodily injury accidents and 5.33 percent for property-damage only accidents, Devlin dismisses variations from the 9.62 percent derived for fatal accidents as reporting effects caused by the incentives created by the new regime to classify as accidents with injuries accidents that would previously have been declared as accidents involving only material damages. Supra, note 49.

[18] Devlin (1988b) at 35.

New Zealand, which also has a pure no-fault system and until 1982 had a flat-rating premium structure,[21] does not provide empirical evidence from which it is any easier to draw conclusions. In a study that reviewed raw data on driving activity and accident rates in New Zealand before and after the introduction of the pure no-fault system in 1972, Brown[22] found "no significant increase in motoring activity" and "no noticeable increase in accident rates" as a result of the change in regime.[23] However, Brown himself acknowledges the considerable influence on the figures he reports of other factors, such as gasoline supply shortages and changes in motoring laws and policing activity.[24] Consequently, in the absence of multivariate analysis, his findings are of limited value. In a more rigorous study, McEwin compared fatal accidents in New Zealand and all Australian states and territories during the years 1970-1981. He reports that comprehensive no-fault schemes were responsible for a 16 percent annual increase in automobile fatalities per capita.[25] McEwin himself admits that "the problems involved in modelling road accidents" suggest that little weight should be placed on the size of the impact derived.[26]

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[19] Devlin (1988a) at 206,212.

[20] Devlin explicitly ignores the impact of this variable, on the questionable grounds that "in the real world the link between care and premiums is tenuous" since premiums adjust to care indicia only with a lag and are thus "fixed in any one period." Devlin (1988b) at 14-15.

[21] Craig Brown, "Deterrence in Tort and No-Fault: The New Zealand Experience" (1985),73 California Law Review, 983.

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[22] Brown,976.

[23] Ibid. at 1001-2. While registered motor vehicles per capita continued a steady upward trend " most probably attributable to a wealth effect," the absolute numbers of automobile injuries and fatalities as well as the frequency of such accidents per kilometres travelled steadily declined after the passage of the Accident Compensation Act. Ibid. at 984-94.

[24] Ibid. at 989,994-1001.

[25] McEwin at 23.

[26] Ibid. at 23.

It is difficult to support our earlier hypotheses about the relative deterrence effects of pure no-fault and threshold systems generally. It is even more difficult to draw from the empirical evidence any conclusions about the relative deterrence effects of the Québec system and threshold systems. However, given the impact of the flat-rate premium structure on deterrence, it is safe to say that on deterrence grounds the Québec system is inferior to the new Ontario system.

(b) Compensation - The Victim Coverage Perspective

(i) Percentage of Victims Compensated:

One would assume that with respect to the percentage of auto accident victims that are compensated to any extent, the difference between threshold no-fault and pure no-fault regimes would be largely insignificant. In a threshold regime all those who are able to sue are also eligible for no-fault benefits. This means that although a pure no-fault regime will bar a number of accident victims from compensation through the tort system which a threshold system would not, it would not deprive any of these claimants of no-fault compensation.

In Québec, it is estimated that the proportion of victims receiving any compensation increased by about 20% after the introduction of pure no-fault.[27] Of course, this estimate tells us nothing directly about how the Québec regime compares to threshold regimes on the criterion of percentage of victims receiving any compensation. However, it may be of some importance to note that this 20% increase over Québec's former fault-based system[28] is much larger than the 7% superiority of U.S. states that have threshold regimes over those that have tort regimes.[29]

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[27] Slater (1986) 322, 334. Duff A,33.

(ii) Adequacy of Victim Coverage

The Québec system is not strongly dissimilar to the new Ontario system in terms of the extent of victim coverage, but in the final analysis it does less well than the Ontario system on this criterion. The no-fault benefits for the compensation of economic losses in the two systems are roughly comparable. However, in those cases that would have cleared the Ontario threshold, compensation for loss of income is lower in Québec for relatively high income earners. The systems are surprisingly similar with respect to the degree of compensation for non-pecuniary losses. In the Ontario system, non-pecuniary loss compensation may result in those cases that can sustain a tort claim, namely instances of death, permanent serious disfigurement, or permanent serious impairment of an important bodily function caused by a continuing injury which is physical in nature. In Québec, a lump sum of as much as $75,000 ($100,000 in 1991 and $125,000 in 1992) is payable for permanent after-effects of injury.[30] Nevertheless, this compensation for non-pecuniary loss, though significant, is not as great as the maximum tort award, which is $200,000.[31] In Québec, compensation for non-pecuniary loss is not available in the case of death as it is in Ontario (through the tort system). However, this difference is mitigated by the fact that the scheduled death benefits are much higher in Québec.

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[28] Prior to 1978 the regime was based on the concept of quasi-delict in civil law. This regime is as fault based, if not more so, as a pure tort regime. For further explanation see Devlin (1988 a) at 46-54.

[29] 80% of auto accident victims receive some compensation from any source in tort states; 87% of auto accident victims receive some compensation in threshold states. Houchens at 16. See note 76.

(c) Compensation - The Cost Internalization Perspective

The Québec system does away entirely with the notion of fault for corporal damages (injuries and fatalities)[32]. Its premiums are uniform for given classes of vehicles,which means that there is no risk-rating whatever within the system. It is clear,therefore, that the Québec plan is much inferior to the new

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[30] The after-effects need not be physical in nature. Psychoses, chronic neuroses and personality disorders are covered. O.C. 1921-89, G.O.Q. 1989.II.74639-0.

[31] In the trilogy of cases, Andrews, Teno and Thornton. the S.C.C. capped non-pecuniary damages at $100,000 (1978 dollars).

[32] Vehicle damage claims remain outside the Québec plan and are administered by the private sector. These claims have been removed from the court system because of the statutory provision that the insured is compensated for his property damage by his own liability insurer who indemnifies him directly under the liability section of the policy, to the extent that the insured is not responsible for the accident (as in the new Ontario system). Fault is determined by an internal insurance fault schedule. Before fault is determined through the fault chart, though, insurers have to determine how an accident occurred.

Ontario system in terms of the internalization of the costs of high-risk driving to high-risk drivers.

In comparing the Québec and Ontario systems on the basis of the extent of the internalization of the costs of traffic accidents to driving activities generally, the evaluation is less obvious. In the Québec plan the no-fault benefits are primary sources of compensation. This contrasts with the Ontario plan in which the no-fault benefits are secondary to payments under income continuation benefit plans and to payments received under sick leave plans arising by reason of occupation or employment. At first impression, sources other than drivers are not bearing the cost of driving under the Québec system as they do in Ontario. This impression is misleading, however, for the Québec plan, which is government run, has been, since 1982, partially funded from general revenues.[33] It is not clear then which system is better at internalizing the costs of driving to the driving population.

(d) Operational Efficiencies

Since the number of lawsuits in pure no-fault regimes is smaller than that under threshold no-fault, and especially since the largest, and therefore most expensive, lawsuits are also eliminated, administrative costs will be lower in pure no-fault. Claimants' legal expenses, which are estimated to consume 10 to 15% of liability premiums in other jurisdictions Canada, will be lower, as will public expenditures on legal adjudication.

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[33] A part of the existing tax revenues from fuel sales was earmarked to finance the public regime, but the tax rates on fuel were not increased. Gaudry, at 26, note 2. Devlin states that this tax was increased, but in 1982 it was discontinued. The amount of government funding arising in this way is in the 6% range. Devlin (1988 a) at 62.

Even ignoring the effect of lower public expenditures on trials, the empirical evidence supports the contention that administrative costs will be lower in pure no-fault regimes relative to threshold regimes. According to the U.S. Dept. of Transportation study, the payout/payin ratio for verbal threshold states was 47.8%, and in Michigan 55.1%. These figures appear low in comparison to the ratio of 67% for the pure no-fault plan in Québec[34] (1979-84). However, this comparison is slightly misleading since in Québec the ratio of net compensation to premiums paid (at 58%) was higher than Michigan even under the former minimal no-fault regime. Other studies have also shown an improvement in the ratio with the change of regimes in Québec, although the size of it is more contentious. Devlin concludes that the elimination of the fault-based civil liability regime in Québec generated administrative savings of about 10%, while the creation of a public insurance monopoly was responsible for further savings of 14% as a result of cost savings in business acquisition costs (brokerage fees) and underwriting costs.[35]

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[34] Ontario Task Force on Insurance, Final Report of the Ontario Task Force on Insurance (Slater Report) (1986) at 332. It is unclear if this figure accounts for the reduction in claimant legal expenses associated with no-fault compensation.

[35] Devlin (1988a) at 257.

Osborne, on the other hand, is critical of the large size of the latter figure, as he sees no evidence to suggest that a public monopoly is any more efficient in underwriting insurance than a competitive private sector.[36] He also doubts that the administrative savings would be as high as 10%. He argues that with respect to insurers' operating expenses and claims adjustment costs (defence legal costs plus adjusters' costs) only the latter would be reduced with the introduction of no-fault. This is because there is no reason to conclude that the insurer's administrative infra-structure would shrink if the compensation were to change as long as insurance is sold on an individual basis. Osborne estimated that the reduction in this area would be no more than 5% for a regime change from minimal no-fault to pure no-fault[37]; the reduction for a regime change from threshold to pure no-fault would be even smaller.[38] In any case a pure no-fault regime is conceded to have some administrative cost saving over a threshold no-fault regime.

As for the other form of operational efficiency with which we are concerned-the speed at which the flow of payments is initiated - we would also expect an improvement over threshold regimes. This is because in a pure no-fault system no payment flows are delayed as a result of lawsuits. While there are no figures comparing threshold and pure no-fault regimes, the reduction in payment flow delays in pure no-fault relative to minimal no-fault is impressive:

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[36] Osborne vol. 1 at 676-691.

[37] The number of reviews (by the Régie) and appeals (to the Commission des Affaires Sociales) are not insignificant. In 1987 of the 35,000 claims, there were 5,000 reviews and a further 2,000 appeals. Many of these were over the question of non-pecuniary losses. Osborne vol. 1 at 460.

[38] Osborne vol.1 at 522-525.

Table 7.2

Percentage of Victims in Québec Who Have Received Their First Payment Per Month[39]

	< 1 month	< 2 mo.	< 3 mo.	< 6 mo.	> 6 mo.
liability claims in tort system[40] (1970/71)	5%	12%	18%	35%	65%
Present System	32%	70%	84%	96%	4%

Table 7.3

Percentage of Victims Compensated within Year in Québec[41]

Year	Percentage of Victims
1978	96.15%
1979	95.97%
1980	95.94%
1981	95.53%
1982	96.11%

---

[39] Fluet and Lefebvre (1986,165) cited in Devlin (1988a) at 74. Since tort delay is based on the duration between the accident and settlement, and no-fault delay measures the time between claim filing and first payment, this comparison exaggerates the difference between the two systems. Nevertheless, since only about 10% of tort claimants obtain advance payments before final settlement, and there is little reason to delay filing first-party claims, any exaggeration is probably slight.

[40] For liability claims the first payment is also the final payment.

[41] Devlin (1988a) at 72.

(e) Premium Costs

Devlin undertakes a comparison of premium levels in the Québec system and Québec's former civil law system[42]. To control for factors other than the change in regime, she takes as her dependent variable the average Québec premium minus the average Ontario liability premium. By subtracting Ontario premiums Devlin hopes to remove the effects of factors other than the change in regime, the assumption being that these factors will be equally present in Québec and Ontario and, therefore, the subtraction of Ontario's premium rate guarantees the subtraction of the effects of these factors plus some constant, k. The following table shows the results of Devlin's analysis.

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[42] *Ibid*. at 59-68.

Table 7.4

Québec Minus Ontario Liability Insurance Premiums[43]
Increasing Riskiness of Driver Class ----->

Year Class 10	Class 02	Class 18	Class 08	Class 11	
	DR 3/5	DR 3/5	DR 3/5	DR 0	DR 0
Former Regime					
1972	12	15	17	61	73
1973	12	15	17	61	73
1974	11	14	16	58	58
1975	22	26	30	96	96
1976	31	40	43	156	156
1977	16	19	22	70	70
Present Regime					
1978	33	8	-11	-470	-470
1979	46	65	42	-406	-406
1980	43	64	39	-446	-446
1981	57	83	43	-569	-569
1982	89	-23	-87	-764	-924
1983	88	-9	-88	-703	-895
1984	74	40	-38	-709	-858
1985	62	17	-63	-763	-915
% Change in The Average of the two Periods	+265%	+41%	-188%	-820%	
-878%					

For purposes of comparison, one will recall that all premiums in the new threshold regime in Ontario are estimated to be between 22 to 35% lower than under the previous regime. It is not inappropriate to view the former Quebec civil law system and the former Ontario system as similar, given that they were both fault based. Consequently, some rough comparison can be made between premium levels in the new Ontario regime and the Québec regime by comparing the -22 to -35% figure for all driver classes to the above percentage-change figures. Clearly, low risk drivers pay much higher premiums and high risk drivers pay very much lower premiums in Québec relative to the Ontario threshold system.

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[43] *Ibid*. at 65.

It ought to be noted that after 1989 premiums in Québec will have to increase (unless the government increases its subsidization of the Québec plan) as a result of the increased lump sum payments for non-pecuniary loss. The budget of the Régie is expected to require an increase of 4.5% as a result of the amendments in bill 92 (1989), chapter 15.[44]

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[44] Osborne, vol. 1 at 464.

CHAPTER 8

ELECTIVE NO-FAULT

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I DESCRIPTION OF THE MODEL

(a) Introduction

Professor Jeffrey O'Connell of the University of Virginia Law School has developed a series a ingenious proposals for permitting either injurers or victims (in product, automobile, medical, and sports contexts) to choose between offering or securing expeditious compensation for economic and medical costs on a no-fault basis and waiving rights to tort claims, or waiving the no-fault benefits and pursuing tort claims for full tort measures of damages. For example, in the auto accident context, he envisages a scheme whereby drivers can choose to purchase either first-party no-fault insurance or third-party liability insurance.[1] If two people with first-party no-fault insurance collide with each other, each looks to his or her own insurer to cover his or her losses. If two people with third-party coverage collide, entitlements to recover would be resolved as they are at present under traditional tort-third-party insurance systems. If a person with first-party no-fault insurance collides with someone with third-party insurance, the first person looks to his or her own insurer to cover his or her own losses, and is not liable for the other person's losses, even when the first person was negligent. The second person would look to his or her own insurer for full tort measures of compensation if negligence on the part of the first person could be proved. This coverage would be treated as analogous to the conventional coverage of claims against uninsured motorists.

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[1] O'Connell and R. Joost (1986).

These proposals have been advanced by O'Connell partly because of a recognition of the political resistance in the United State to further adoption of mandatory no-fault compensation schemes. This resistance no doubt partly reflects the influence of special interest groups, including the personal injury bar, to further curtailments of tort claims. O'Connell now seems prepared to gamble that if no-fault cannot prevail in the political market-place, it may well prevail as a matter of consumer choice in the economic market-place. Although he loads the characterization somewhat, he also acknowledges that there may be genuine divergences in consumer preferences as to tort-insurance regimes that preclude a judgment that all accident victims are clearly better off under one system or the other:

> The liability option might be a "better deal" than the no-fault option for individuals who have very high limits of both health insurance and income continuation insurance. It might also be preferred by individuals who view auto accidents as opportunities to "win" a large sum of money, rather than as misfortunes that can result in permanent injury, and who believe that there is no real danger of losing, because Medicare, Medicaid, and welfare will provide for them if they do not win a liability award. The liability option would seem to be more attractive to people who like to sue, who dream of making a "big killing," or who distrust insurance companies. The liability option would pay relatively more money than the no-fault option if the accident victim involved is one who has suffered only moderate injuries, such as back strain, whiplash, or fracture. Moderate injuries cause only limited medical expense and work loss, but they can cause a great deal of pain and suffering, compensable under liability insurance but not under no-fault insurance.
>
> The no-fault option would be better for individuals who want to be sure that catastrophic losses will not outstrip their own coverage no matter how high. It

> would certainly be better for individuals who do not have very high limits of both health insurance and income continuation insurance. It would also be the preferred choice of motorists who do not want to be paid for their pain and suffering but who do want swift, sure, and complete payment of their accident-caused personal economic losses. This option would be more attractive to people who dislike gambling, who eschew litigation, or who distrust lawyers. In general, the no-fault option would assure relatively more money than the liability option to an accident victim who suffers very severe injuries such as a severing of the spinal cord or a serious brain concussion. The economic loss of such victims can easily outstrip the limits of the average liability insurance policy.

This is not an entirely fair or complete characterization of the factors that would influence individual choice between the fault and no-fault options. In particular, it ignores the fact that low-income (who are often also young) and elderly individuals would prefer first-party no-fault because they are insuring lower than average prospective income losses. It also ignores the fact that high risk drivers and drivers of heavy vehicles (like trucks) who cause disproportionate injuries to third parties (drivers of lighter vehicles, motor-cyclists, cyclists, pedestrians) relative to themselves would prefer the no-fault option because it insulates them from liability (and hence coverage costs) to negligently injured third parties.

(b) The I.B.C. Elective Model

In 1989, the Insurance Bureau of Canada developed a detailed elective no-fault proposal which was submitted to the Ontario Automobile Insurance Board for review. It was ultimately rejected by the Board.[2] However, because it goes further than any other no-fault proposal in detailing the choice options and operationalizing the choice regime, we have taken it as our exemplary model of elective no-fault, although numerous variants of choice models can be devised.[3]

Under the proposed elective system, motorists in purchasing automobile insurance would choose between purchasing a tort policy or purchasing a no-fault policy. The tort policy would provide the same third-party liability, uninsured motorists coverage, and comprehensive and collision coverage as provided by the standard automobile insurance policies written in Ontario prior to the adoption of the new threshold no-fault system and similar to policies currently been written in Alberta. However, the tort policy would contain no no-fault benefits at all. The IBC argues that in order to keep premiums for the tort policy relatively close to those applicable to the no-fault policy, so as to present consumers with a realistic choice, no-fault benefits should be excluded from the tort policy. Moreover, the IBC considered that the tort policy option would be particularly attractive to consumers who hold accident coverage through employer group insurance or through privately placed insurance, which would make any no-fault benefits redundant to them and indeed duplicative. The tort policy option is also predicated upon tort reforms with respect to prejudgment interest, collateral benefits, gross-ups for income tax, and no legal costs being payable for claims under $10,000.

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[2] Ontario Insurance Board (July, 1989).

[3] See Symposium Issue, San Diego L. Rev. (1989).

The IBC proposed no-fault option would provide the following coverage:

(1) Medical and rehabilitation benefits up to $500,000.

(2) Long-term care benefits up to $500,000.

(3) Disability benefits up to $600 per week.

(a) Employed Persons

Entitlement for a employed person would be 90% of net income to a maximum of $600 per week. Payments would continue for up to two years if the insured were unable to return to the job he or she had at the time of the accident and thereafter for as long as the insured could not take any job for which he or she was reasonably suited. The payments to the totally disabled would continue for life subject to an offset for pensions after age 65. These disability benefits would be subject to collateral benefit offsets with respect to unemployment insurance or other wage-continuation plans.

(b) The Deemed to be Employed

The deemed to be employed would be entitled to 90% of net income to a maximum of $600 per week. Persons in this category would have to be between the ages of 16 and 25 and have worked six of the twelve months prior to the accident.

(c) Students

Elementary school students would receive $1000 for each lost school year plus $340 per week commencing at age 19 if the disability lasted that long and rendered such person unable to attend school. A secondary school student would receive $2,000 for loss of the school year and again $340 per week commending at age 19. College or university students would receive $4,000 for the loss of the school year and again $340 per week when no longer entitled to loss of school year benefits.

(4) Funeral Expenses up to $3,000

(5) Death Benefits up to $200,000

Death benefits would be related to income. The death of a head of household or spouse would lead a lump sum payment equal to four times the gross employment income of the deceased as derived from the last income tax return filed before death. The estate of a dependent child or the estate of a person with no dependents would receive $5,000 on death.

(6) Housekeeping and Child Care Services

An amount of $200 per week maximum would be payable on the basis of reasonable expenses incurred for up to three years for housekeeping services necessitated by the injury or death of a person who normally provides these services. In addition to the $200 per week for housekeeping services, a further $200 per week (with a further $50 per week for each additional dependent child to a maximum of $350 per week) would be payable for child care expenses when the person normally providing the child care is disabled.

(7) Options

All of the above no-fault benefits would be capable of being increased at the option of the policy-maker. However, the coverage outlined should cover the needs of over 90% of Ontario consumers.

(8) Indexing

After an accident has occurred, the disability benefits for loss of employment income would be indexed to the Consumer Price Index but not to exceed 6% in any one year.

(9) Coverage per Claimant

All the above payments would be made on a per claimant basis as opposed to a per accident basis. Hence, regardless of the number of insured persons injured in an accident, the above limits would apply separately to each person so injured.

(10) Fast Resolution of Disputes

The IBC proposed an Alternative Dispute Resolution process involving mediation and if necessary binding arbitration with respect to the propriety of any payments claimed by an insured under a policy. The objective would be that all such disputes would be resolved by a totally independent mediator or arbitrator within 30 to 90 days of the dispute arising.

(11) Residual Liability Coverage

Where automobiles insured in Ontario are operated outside Ontario, there would be third-party liability coverage under the no-fault policy option for accidents occurring outside of Ontario. The no-fault benefits would be payable to all insured persons regardless of where an accident occurs in North American.

It will be noted that under the no-fault policy option, no payments are provided for non-pecuniary losses.

(12) Implementation Proposals

Under additional proposals developed by the IBC, the following rules would govern choices made by insureds:

1. All persons resident in Ontario would be deemed to have chosen the tort policy until the election has been made to be insured by the no-fault policy.
2. The person buying the automobile insurance makes the choice for his or her spouse as to whether a tort policy or no-fault policy is purchased. This decision binds the policyholder's spouse and their relatives who are financially dependent on them.
3. While the owner of more than one automobile must insure all such automobiles in one form or the other, households with

more than one vehicle owned separately by members of the household can insure those vehicles differently. When spouses owning separate vehicles choose different options, dependent children are bound by the decision of the parent that purchases the no-fault policy option.

4. Policy-holders would be at liberty to move from the no-fault system to the tort system or vice-a-versa at will provided that the form of insurance existing at the time of an accident will govern payment for claims with respect to that accident.
5. Those who have not elected to choose a no-fault form of policy remain in the tort system. For example, persons who are presently not insured under an automobile policy i.e. persons who do not own a car and are not the spouse of a person owning a car living in the same household or financially dependent relatives of the policy-holder or his or her spouse will not be deemed to have made any choice and hence will remain under the tort system of compensation.
6. Once a person has elected to make a choice, it is irrelevant whether the insured person is a driver, a passenger, or a pedestrian when the injury occurs anywhere in North America.
7. In sharp contrast to Professor O'Connell's initial proposal, which contemplated that in an accident involving drivers who had elected the tort option the right to sue each other (and each other's insurers) would be preserved, the IBC proposal contemplates that all claims must be asserted directly

against the insured's own insurer and against no one else. This is not only true with respect to the no-fault option but also the tort option. In other words, anyone insured under either type of auto insurance policy simply claims against the insurance company that issued that policy.

8. Where the motor vehicle accident happens outside of Ontario, the no-fault benefits are still payed to the insured if the insured has chosen the no-fault form of coverage. However, the insurer will have a right of subrogation if the accident occurs outside of Ontario.
9. Persons resident outside of Ontario who are involved in accidents in Ontario may normally sue only in tort in Ontario.
10. No insurer is entitled to subrogation against any other insurer or any other person for payments made under either the no-fault policy option or the tort policy option if the accident occurs in Ontario and the person responsible for the accident has either form of policy.
11. For accidents occurring in Ontario, no pedestrian injured by a private passenger vehicle could sue the owner/driver of such vehicle if the pedestrian was insured by an automobile insurance policy of either type. Such claim is made against the pedestrian's own insurer depending on the choice made as to form of coverage. Non-insured pedestrians could sue as at present.
12. For accidents occurring in Ontario, no insured occupant of a

private passenger vehicle could sue any tortfeaser. The claim must be asserted against the insurer of the claimant.

II EVALUATION OF THE MODEL

(a) Deterrence/Prevention

The IBC claims that there would be no substantial difference between the insurance rating practices applicable to the tort policy option and the no-fault policy option. In each case, similar criteria would be applied in order to set premiums. Criminal Code or Highway Traffic Act convictions, as well as 'at fault' accidents, could lead to premium increases or surcharges with respect to both kinds of policies. To the extent that state regulatory policies permit, age and sex would remain relevant rating variables with respect to both classes of policy.

This is the area where the elective no-fault concept has attracted most criticism. Both Professor George Priest of the Yale Law School[4] and Professor Jack Carr of University of Toronto Department of Economics[5] have argued vigorously that elective no-fault is subject to serious adverse selection problems. In particular, they claim that higher risk, more accident prone drivers will elect into the no-fault option because even with the rating variables applied as above, drivers whose activities or conduct causes disproportionate losses to third-parties relative to themselves will not find these losses reflected in their first-party insurance premiums. Moreover, to the extent that they are largely covered for their own medical and pecuniary losses, even incentives to avoid activities or conduct that may be dangerous to themselves will be muted. This criticism is, of course, similar to the concerns that have been expressed with respect to other no-fault regimes canvassed earlier in this study. However, the argument here goes further in suggesting that a stable equilibrium between consumers who elect the no-fault option and those whose elect the tort option may not exist. That is to say, as an increasing number of high risk drivers elect into the no-fault policy pool, drivers who have elected into the tort policy pool will find that their premiums escalate, given that under the IBC proposal insureds must press their tort claims against their own insurer and pay the premiums that reflect the extent of these claims. Thus, consumers who elect into the no-fault pool will in effect externalize some significant fraction of their accident costs on to consumers who have elected into the tort pool. With an increasing divergence between the average premiums associated with policies in the two pools, consumers who initially elected into the tort pool will find this option increasingly unattractive and may well be induced to switch subsequently into the no-fault pool, thus ultimately turning the regime into a _de facto_ mandatory no-fault regime, with similar safety properties to the Quebec pure no-fault regime.

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[4] G. Priest (1988).

[5] J. Carr (1988).

It is difficult to deny some force to these criticisms of the elective no-fault model. However, it is also difficult to predict empirically how strong these adverse selection tendencies are likely to prove, in part because it is difficult to assess the weight that consumers will attach to other factors that bear on their choices. For example, consumes who do not have any collateral sources of accident coverage and place significant value on generous coverage of pecuniary losses incurred as a result of an accident, whether caused by someone else's fault or not, and also attach significant weight to rapid initiation of a stream of payment, will find the no-fault policy option attractive for these reasons. Conversely, consumers who have substantial collateral sources of accident coverage, to which the no-fault benefits are secondary, will find the no-fault option correspondingly less attractive and the tort option correspondingly more attractive. As well, the adverse selection concern assumes significant deterrence properties for the tort system, even with third-party liability insurance, and further assumes that with extensive risk-rating not only of third-party liability insurance but also the first-party no-fault policy package, consumers in their choice of levels and quality of driving activity will be significantly influenced by differences in the insurance premium implications of their conduct under one regime relative to the other. It will be recalled that we discussed this issue in the context of the Quebec pure no-fault regime, where the empirical evidence on the adverse safety effects of the Quebec regime leaves open some ambiguity as to whether extensive risk rating of first-party premiums would mostly correct for the safety effects, or whether even with extensive risk-raking of first-party losses, there would still be a significant diminution in safety incentives, given that losses negligently inflicted on third parties will not be reflected in these first-party premiums, however risk-rated. A plausible view is that these safety losses are likely to be relative small, and could be more directly and effectively addressed through enhanced public sanctions directed to the regulation of traffic safety as outlined in Chapter 3.

(b) Compensation - The Victim Coverage Perspective

Under an elective no-fault regime of the kind proposed by the IBC, it is difficult to make any firm empirical judgments as to what percentage of traffic accident victims will obtain compensation and how adequate the levels of compensation are likely to be. Obviously, this centrally turns on how many consumers would elect into the no-fault or tort policy options. For those opting into the no-fault option, the IBC no-fault benefit package provides relatively generous coverage of most forms of pecuniary losses, although removing any entitlement to non-pecuniary losses. For consumers electing into the tort policy option, there would be no no-fault benefits at all, so that where an insured is unable to prove to his or her insurer that some other driver was wholly or partially at fault for an accident that has resulted in losses to the insured, he or she would be without any direct coverage. However, to the extent that one assumes that most people who elect into the tort policy option are doing so because they are already holding adequate group or private accident insurance coverage to which they can have recourse in this event, this concern is diminished.

(c) Compensation - The Cost Internalization Perspective

Obviously, for reasons already noted, the IBC proposal largely relieves negligent drivers of any financial responsibility for accident costs imposed on innocent third-parties. This is most obviously the case for consumers who elect into the no-fault option, but even for consumers who elect into the tort option they will not face premium costs for losses negligently inflicted on third parties, given that each insured, even under the tort policy option, claims for tort damages on a first-party basis only against his own insurer. To the extent that extensive risk-rating features are retained with respect to both the no-fault and the tort policy options, a substantial fraction of accident costs will still be internalized to high-risk drivers, in contrast to the Quebec pure no-fault system with its flat-rating features. To the extent that the IBC proposal contemplates that collateral benefits would be subtracted both from no-fault benefits and tort entitlements, this might be viewed as externalizing some fraction of total accident costs onto sources unrelated to driving activities. It is not clear from the IBC proposal whether OHIP would retain subrogation rights with respect to medical expenses incurred by victims of traffic accidents either with respect to no-fault benefits or tort entitlements. To the extent that this subrogation right is curtailed or foreclosed, as under the new Ontario threshold no-fault regime, obviously traffic accident costs are being externalized onto the general body of taxpayers.

(d) Operational Efficiency

Here, it will be recalled from earlier chapters, we are concerned with both the amount of premium dollars consumed in administrative costs and the timeliness of the initiation of a flow of payments to injured traffic accident victims. Under the elective no-fault proposal of the IBC, it is difficult to offer firm judgments on these two issues as much obviously depends on what percentage of consumers elect into either of the two policy options. If a large percentage elect into the no-fault policy option, savings in administration costs and gains in improvements in timeliness of payments of the kind described in earlier chapters canvassing other no-fault options are likely to be realized. Even in the case of consumers who elect into the tort policy option, given that under the IBC proposal this is structured on a first-party basis where the insured claims the tort damages from his own insurer with respect to injuries caused by negligent third parties, it might be conjectured that with fewer parties involved, administrative costs can be conserved and claims resolved more expeditiously, thus leading to earlier payments.

One administrative issue that particularly agitated insurance brokers in Ontario with respect to the IBC proposal and partly led to its rejection by the Ontario Automobile Insurance Board was the possibility of extensive litigation and liability over whether consumers had made informed choices between the two options, in cases where ex post a consumer would find it to his or her advantage to reverse election. While government prescribed forms setting out the choices and requiring signature by the consumer, leading to a conclusive or rebuttable presumption of an informed choice, would have addressed these concerns in the IBC view, the brokers' association and the Board remained unconvinced.

(e) Premium Costs

The IBC estimates that for its new tort policy option, assuming tort reform and no no-fault benefits, for compulsory coverage only, the average premium as of January 1, 1989 would be $561, which would be a $137 or 32.3% increase from the then capped market rate for the existing standard policy, but a $93 or 14.2% decrease from what the IBC considered as adequate costing of the then standard policy. For the average full package of coverage i.e. compulsory coverage plus collision and comprehensive) under the new tort policy option, the IBC estimated a premium of $850, which would entail a $120 or 16.4%

increase from the then capped market rates for the standard policy, but a $69 or 7.5% decrease from adequate costing for the then standard policy.

With respect to the proposed new no-fault policy option, assuming tort reforms, in particular in this case subtraction of collateral benefits, the IBC estimated a premium for basic no-fault coverage of $433, which would entail a $9 or 2% increase from the then capped market rate for a standard policy, but a $221 or 33.8% decrease from an adequate costing of the then standard policy. The IBC further estimated that for the new no-fault policy option providing not only basic coverage but also collision and comprehensive coverage, the average premium would be $680, which would entail a $50 or 6.8% decrease in cost from the then capped market rate for the standard policy, or a $239 or 26% decrease in cost relative to an adequate costing of the then standard policy. Thus, if one accepts the IBC premium estimates, the new tort policy (with tort reform and accident benefits) would be modestly cheaper than an adequately costed standard policy (at that time similar to the current standard policy in Alberta), and the no-fault policy option would be very substantially cheaper than an adequately costed standard policy of the kind presently in place in Alberta. It should be noted, however, that these cost estimates assume away the adverse selection problem that critics of the elective no-fault concept, like Professors Priest and Carr, regard as a serious deficiency of the regime. If their predictions are accurate, and accidents rates and thus injury costs substantially increase under an elective no-fault regime, the IBC premium costings would require substantial upward revision.

CHAPTER 9

ALBERTA AUTO ACCIDENT COMPENSATION REFORM: A COMPOSITE EVALUATION OF THE OPTIONS

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I INTRODUCTION

In providing a composite summary evaluation of the various reform options against our five evaluative criteria, three important caveats should be borne in mind. First, while the evaluation attempts to take account of both theoretical a priori hypotheses and available empirical evidence as to the likely effects of each option, in the end our judgment are necessarily qualitative and to some extent subjective rather than quantitatively hand-edged, and thus are reasonably contestable in a number of cases. Second, our judgments pertain only to the particular exemplary models chosen as representative of a given option and not to the vast number of variations on each option either extant or possible. Generalizations beyond the particular models chosen for analysis would be highly precarious. Third, as we move through the various no-fault alternatives to the current Alberta model, we are assuming in every case (including the Alberta model) that the regulatory and public enforcement reforms and tort reforms discussed in the study have been implemented. We thus hold these two elements in the reform firmament constant as we review the other reform options.

II THE EVALUATIVE CRITERIA APPLIED

(a) Deterrence/Prevention

On a scale of 1-5 (best to worst), we would rank the reform options reviewed with respect to the deterrence or prevention of accidents as follows:

Table 1

Deterrence/Prevention

Status Quo	1
Enhanced Add-On	2
Threshold No-Fault	3
Elective No-Fault	4
Pure No-Fault	5

The reasoning underlying our judgment is straightforward. As one progresses through the various no-fault options, more and more cases are taken out of the tort system, and fewer and fewer wrongdoers are forced to bear the costs they inflict on others through their wrongdoing, thus attenuating incentives to adopt optimal levels of care towards others. While a sensitive risk-rating regime for first-party no-fault premiums can internalize many of the self-inflicted costs of careless driving, costs inflicted on others will not be reflected in these premiums and even the incentives to avoid injury to oneself will be more muted under a no-fault regime relative to the status quo where a large proportion of self-inflicted costs of careless driving are borne by the victim.

(b) Compensation - The Victim Coverage Perspective

This evaluative criterion is sensitive to two factors: the percentage of all traffic victims covered for personal injuries by the compensation regime, and the adequacy of coverage. While the first factor is straightforward enough, adequacy of coverage raises the question of whether inclusion or exclusion of non-pecuniary damages is a positive or negative feature of a scheme. From an optimal insurance perspective, exclusion is arguably positive. From a full loss compensation perspective, it is clearly negative. While we recognize that this issue is highly controversial, we have chosen to apply the victim coverage criterion weighing both percentage of victims covered and percentage of all losses, pecuniary and non-pecuniary, covered by a scheme.

Table 2

Compensation - The Victim Coverage Perspective

Enhanced Add-On	1
Threshold No-Fault	2
Pure No-Fault	3
Elective No-Fault	4
Status Quo	5

Our ranking here, which may be debatable even in our own terms, is that the exemplary enhanced add-on no-fault scheme ranks best, because most traffic victims are covered, and by preserving tort claims in all cases, the right to sue wrongdoers for residual economic losses and especially non-pecuniary losses is preserved for that subset of traffic victims with valid negligence claims. Threshold no-fault ranks second, because most traffic victims are covered, and a small subset retain the right to sue for residual economic losses and for non-pecuniary losses if the severity of their injuries exceeds the threshold and they otherwise have valid negligence claims. Pure no-fault ranks third: while most traffic victims are covered, claims for non-pecuniary losses are tightly constrained, and residual economic losses are not covered. Elective no-fault is ranked fourth, rather speculatively. On the assumption that a majority of consumers will elect the no-fault option and drivers electing into the tort option will typically have substantial collateral accident coverage, most (but not all) traffic accident victims will be covered for pecuniary losses whether at fault or not, while some subset will preserve the right to press tort claims for residual economic losses and non-pecuniary losses. The status quo is ranked fifth, because probably about 40% of traffic accident victims are not covered by the regime at all (or covered only minimally), although for those with a valid tort claim full economic and non-pecuniary losses are recoverable.

(c) Compensation - The Cost Internalization Perspective

Our ranking here, not surprisingly, tracks our ranking of the options with respect to deterrence-prevention.

Table 3

Compensation - The Cost Internalization Perspective

Status Quo	1
Enhanced Add-On	2
Threshold No-Fault	3
Elective No-Fault	4
Pure No-Fault	5

Our reasoning is as follows. The Alberta status quo (maximum tort, minimum no-fault) most fully comports with corrective justice rationales for the allocation of accident costs by allocating these costs to wrongdoers where they have inflicted injury on others or by denying recovery to victims whose own conduct is faulty. The enhanced add-on system preserves a substantial tort component so that the same argument applies mutatis mutandis, although to the extent that some claims that would otherwise have been validly pressed by victims against injurers are redirected to the first party no-fault component of the scheme and to the extent that the abolition of the collateral benefits rule (as proposed by Osborne) redirect traffic accident costs to non-traffic related forms of first-party or social insurance, accident costs will be neither fully internalized to faulty drivers nor even to driving activities at large. We rank the threshold no-fault option (at least as exemplified by the new Ontario scheme) third, because it is even less sensitive to corrective justice considerations, by removing a higher percentage of cases from the tort system and thus shielding a higher percentage of wrongdoers from the consequences of their wrongdoing, while also externalizing a significant percentage of traffic accident costs beyond driving activity altogether through abolition of the collateral benefits rule and repeal of the right of subrogation of the provincial health care system for medical costs incurred as a result of driver wrongdoing towards others. We rank elective no-fault tentatively fourth because negligent drivers who have elected into the tort option will bear their own injury costs and extensive risk-rating of both no-fault and tort policies will internalize a substantial fraction of accident costs to high-risk drivers, although subtraction of collateral benefits from both no-fault and tort recoveries will externalize some traffic accident costs to sources unrelated to driving activities. We rank the pure no-fault option fifth, because it abandons any attempts to internalize accident costs to wrongdoers on an individualized basis, and depending on the risk rating regime for first-party no-fault premiums that is adopted may heavily attenuate internalization of accident costs to wrongdoers or riskier classes of drivers through premium structures. If pure no-fault benefits were also made secondary to other non-traffic related forms of first-party or social insurance, externalization of traffic accident costs beyond driving activity altogether would occur.

(d) Operational Efficiency

This evaluative criterion is sensitive to two factors: the percentage of premium dollars consumed in administrative and transaction costs, and the timeliness of compensation payments. Our evaluation of the options, on this criterion, is as follows:

Table 4

Operational Efficiency

Pure No-Fault	1
Threshold No-Fault	2
Elective No-Fault	3
Enhanced Add-On	4
Status Quo	5

Both theory and the empirical evidence suggest that pure no-fault schemes deliver compensation to victims at lower administrative cost and in a more timely fashion than the other options. Threshold no-fault ranks second, because a high percentage of cases are resolved outside the tort system on a no-fault basis, although costs of litigating the application of the threshold are an offsetting factor. Elective no-fault ranks third because we assume that a majority of drivers will elect into the no-fault option, and those electing into the tort option will deal only with their own insurer on a first-party basis with respect to claims. Enhanced add-on ranks fourth, because while a significant percentage of cases are presumably resolved expeditiously and at low cost on a no-fault basis, the right to sue in tort is preserved in all cases (and may be aggressively exercised, given the "cushion" of the no-fault benefits), with attendant administrative costs and delays in payments of compensation beyond the no-fault benefits. The status quo ranks fifth, obviously enough, because the tort component is largest - issues of liability and quantum are required to be determined in every case - and administration and transaction costs and delays in compensation payments will be greater than under any other option.

(e) Average Premium Costs

With respect to average premium costs, we rank the options as follows:

Table 5

Average Premium Costs

Pure No-Fault	1
Threshold No-Fault	2
Elective No-Fault	3
Status Quo	4
Enhanced Add-On	5

We rank pure no-fault first in terms of premium costs, at least if non-pecuniary damages are largely excluded from coverage, and given administrative savings noted under (d).

Threshold no-fault ranks second, because of the same two factors, and also because under the new Ontario scheme some traffic accident costs are externalized to non-traffic related forms of first-party and social insurance by virtue of the scheme providing only secondary coverage. Elective no-fault is tentatively ranked third, on the assumption that a majority of drivers will elect into the no-fault option and because those electing into the tort option will not be paying for any no-fault benefits and arguably conserve on administrative costs through the first-party nature of the tort coverage, thus reducing premiums below those applicable to maximum tort minimum no-fault regimes (the Alberta status quo). Averaging premiums across the two pools would suggest a ranking between threshold no-fault and the status quo. The status quo is ranked fourth, because non-pecuniary losses will account for a significant percentage of premium dollars and because of higher administrative costs than the other options. Enhanced add-on is ranked fifth (somewhat tentatively) because while a significant fraction of claims will be settled on a no-fault basis, the right to sue for residual economic losses and for non-pecuniary losses is retained in all cases, and there is some evidence that payment of economic losses on a no-fault basis encourages more aggressive litigation strategies with respect to these other losses.

III A COMPOSITE EVALUATION

Consolidating the evaluations reached of the options reviewed under the five foregoing criteria yields the following matrix.

Table 6

Composite Evaluation of Options

	STATUS QUO	ADD-ON	THRESHOLD	PURE NO-FAULT	ELECTIVE NO-FAULT
Deterrence	1	2	3	5	4
Compensation (Coverage)	5	1	2	3	4
Compensation (Internalization)	1	2	3	5	4
Operational Efficiency	5	4	2	1	3
Premium Costs	4	5	2	1	3
TOTAL	16 (3.2)	14 (2.8)	12 (2.4)	15 (3.0)	19 (3.6)

The important policy implications that emerge from this matrix is that in aggregate most of the options reviewed achieve similar rankings, although the rankings diverge widely within particular criteria and across criteria. Much thus turns on how one wishes to weight particular criteria. With respect to elective no-fault, it appears to achieve none of the three substantive goals of an accident compensation scheme very well, and does so at relatively high operational and premium costs. With respect to pure no-fault, it also appears to achieve none of the three substantive goals of an accident compensation regime very well, but whatever it does achieve in these respects, it does so at relatively low cost. Threshold no-fault does somewhat better on all three substantive goals but entails somewhat higher operational and premium costs. Enhanced add-on no-fault does better again on the three substantive goals, but entails significantly higher operational and premium costs. The status quo - Alberta (maximum tort - minimum no-fault) achieves two of the substantive goals of an accident compensation regime relatively well (deterrence, compensation - cost internalization), but one very badly (compensation - victim coverage), but achieves the two goals that it serves relatively well at high operational and premium costs. Thus, when all the theorizing is done and all the empirical evidence on the properties of alternative accident compensation regimes has been gathered and analyzed, the ultimate policy choices are unavoidably social and political, in the sense that normative weights must be attached to competing evaluative criteria which in turn reflect competing philosophical perspectives on the goals of accident law. We are no better equipped to make these choices than any other member of the public or polity who has taken the time and made the effort to understand the choices and the trade-offs that each entails. Hopefully, however, this study will advance public understanding of the choices and trade-offs that must be confronted.

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